

REVISION OF THE AUSTRALIAN *AMARYGMIDES*.

BY THE REV. T. BLACKBURN, B.A., CORR. MEM.

PART. I.

THE GENUS *CHALCOPTERUS*.

In respect of number both of species and specimens this sub-family of the *Tenebrionidae* occupies a very prominent place in the Australian fauna. The great beauty and brilliant colouring of many of its types together with their large size render it likely to prove most attractive to the collector and student. And yet there is probably scarcely a group of genera in the whole of the Australian *Coleoptera* in which the proportion of named species is smaller. This is probably attributable to two causes; the one that on account of the plentiful occurrence and bright colours of many *Amarygmides* the sub-family was well to the front among the *Coleoptera* taken home to Europe by the earlier collectors and described in the brief fashion in which most of the earlier authors "knocked off" our Australian insects—often in five to ten words—so that now the student in approaching it is confronted with a formidable array of names, which are mere names and which could be reliably connected with the insects they belong to only in those cases where the original types are still extant, and by means of an exploration of all the principal museums of Europe. The other cause of the scanty work that has been done on the *Amarygmides* in later times is no doubt the fact that these insects are extremely variable in respect of colours and extremely closely allied *inter se*, so that nothing short of a very careful study of a very large collection of specimens would seem likely to lead to any satisfactory results.

In attempting, then, a systematic work on this sub-family, it appears to me inevitable to accept the certainty that the first memoir of the kind must be very imperfect and must be offered as assuredly fated to much subsequent correction, inasmuch as there are many names connected with descriptions by which it is *impossible* to identify the insects on which they were founded. Nevertheless, if the Australian *Amarygmides* are ever to be worked out satisfactorily, the first step, it appears to me, must be the issue of an imperfect memoir of the kind I have just indicated, and it is for this reason that I have thought I might make a serviceable contribution to the knowledge of our Australian fauna by gathering together as large a collection of *Amarygmides* as I could attain with the help of many obliging correspondents, and offering to the Linnean Society the present memoir, which will, I hope, enable the student without much difficulty to identify at least – (a) all the hitherto named species that have been recognisably described in memoirs scattered through many scientific publications, (b) certain species of which I have been permitted to inspect authentic types through the courtesy of Mr. Masters, Curator of the Macleay Museum, and (c) a considerable number of species to which I give new names.

It will be seen from the foregoing remarks that I confidently anticipate much eventual correction of my work, inasmuch as I have been compelled absolutely to disregard some of the earlier descriptions (especially some of those by Boisduval and Hope), and it is of course to be expected that sooner or later someone will, by examination of such types of the species of those authors as have not perished, identify with them some of the species to which I give new names. But the work cannot be done without accepting that risk ; and as the readiness of my correspondents to lend or give me specimens has brought into my hands a collection of the sub-family larger probably than any other extant, and I have before me all the literature that has been published on the subject, my opportunities are probably exceptionally favourable.

I may say before passing on to a review of the work that has hitherto been done in the sub-family and the statement of my

estimate of its value in detail, that I have proceeded upon the line of regarding the re-naming of an insect that has been already described and named as much less mischievous than the assignment to a species, by a mistaken identification, of a name that really belongs to a different insect. The former error is easily corrected and will lead to nothing worse than a somewhat cumbersome synonymy; the latter is far-reaching, because it is liable to extend indefinitely into the descriptions of *other* species which the author may happen to compare with that which he has erroneously supposed to be the rightful bearer of the name he uses. In this memoir, therefore, I have not assigned an insect to a previously existing name without feeling something like *certainty* that the identification is correct,—in some instances I have passed over in silence specimens before me because I have thought it *probable*, but far short of certain, that a given name belongs to them, and I have treated as new all species that seem distinctly more likely than not (judging by published descriptions together with such inspection of types as has been possible) to be distinct from those previously named. In the tabulation of the characters of *Chalcopteri*, I have enclosed in brackets all the names concerning which I feel any doubt in connecting them with the insect on which I suppose them to have been founded.

It will be remembered that at the time when M. Lacordaire published the “Genera des Coléoptères” and made the *Amarygmides* his 45th tribe of *Tenebrionidae*, 22 names of Australian species attributable to the tribe had been published, all of which M. Lacordaire placed in the genus *Amarygmus*. The “tribe” is distinguished from other *Tenebrionidae* by the following characters in combination:—sides of the head reflexed into an ear-like process above the base of the antennæ, intermediate coxæ provided with trochantins, tarsi hairy beneath, metasternum elongate, prosternum very short in front of the coxæ, anterior femora unarmed. In this tribe (which is found in Asia, Africa, Australia, America and Polynesia) the genus *Amarygmus* was founded by M. Dalman in 1824 on an insect which its author called *Amarygmus speciosus*, whose habitat he did not know and which I believe has

not since been identified. M. Lacordaire distinguishes *Amarygmus* from the other genera of the tribe by the following characters in combination:—eyes partly hidden under the prothorax, intercoxal process of the hind body short and triangular. Two years after the issue of M. Lacordaire's work on the tribe, M. Blessig, in an admirable memoir published by the Russian Entomological Society, pointed out that some at least (he thought probably *all*) of the Australian species attributed to *Amarygmus* differed from some at least of the species occurring in Java, &c., by their mandibles being widely and evenly truncate at the apex (instead of bifid), and he proposed for these species with the mandibles widely truncate the new name *Chalcopterus*, at the same time describing four Victorian species as new and appertaining to his new genus. Since that time no author (except myself) has attributed any more species to *Chalcopterus*; but as *Amarygmi* there have been published, in various periodicals, 21 new species by Mr. Pascoe, 11 by Sir W. Macleay, 1 by Haag-Rutenberg, and by myself 3, together with 4 *Chalcopteri*. In 1870 Mr. Pascoe published (Ann. Nat. Hist. p. 106) a diagnosis of a new genus (*Eurypera*) near *Amarygmus*; the diagnosis, however, is utterly insufficient (as defective as anything Boisduval ever did), stating that the new genus differs from *Amarygmus*, only by its "shorter and more convex body." Until something further is forthcoming regarding this genus I decline to recognise it and shall treat it as non-existent. As I have seen no species resembling *Amarygmus* which agrees with Mr. Pascoe's description of his type of *Eurypera*, I have no means of supplementing his diagnosis.

As I have already remarked (P.L.S.N.S.W, 1888, p. 1434), among the Australian species attributed to *Amarygmus* there are some whose mandibles are bifid at the apex. Whether these are really congeneric with *Amarygmus speciosus*, Dalm., or not is at present incapable of determination, I believe. Indeed, unless I am mistaken, the form of the mandibles in *A. speciosus* itself is uncertain, and it is quite possible that it may be an Australian species with truncate mandibles, in which case M. Blessig's name

Chalcopterus would be a synonym of *Amarygmus*, and a new name would be required for the *Amarygmi* (so-called) with bifid mandibles. Nevertheless, until further evidence is forthcoming, if M. Blessig's separation from *Amarygmus* of those species which differ in the form of their mandibles from *A. speciosus* is to be accepted (and I think it ought to be), M. Blessig's claim of Dalman's name for the species with bifid mandibles seems decisive, and therefore those species of the old genus *Amarygmus* which have mandibles widely and evenly truncate at the apex ought to be relegated to *Chalcopterus*.

. For me, therefore, the Australian *Amarygmides* hitherto named all belong to two genera, distinguished thus:—

- A. Apex of mandibles bifid *Amarygmus*.
 AA. Apex of mandibles widely and evenly truncate *Chalcopterus*.

I am surprised that all the authors subsequent to M. Blessig have disregarded the form of the mandibles (Sir W. Macleay, however, implies, P.L.S.N.S.W. 1887, p. 550, that he had not seen M. Blessig's memoir), especially as Mr. Pascoe (Ann. Nat. Hist. 1869) actually mentions Blessig's remarks on it; for even if it were to be inferred that they regarded the character as too trivial to be treated as generic, it certainly cannot be questioned that it is most valuable for subdividing an aggregate of insects in which sharply defined differences are none too plentiful, and there are few specimens in which the mandibles are so hidden that there is the least difficulty in discerning their form. In the *Chalcopteri* the exposed surface of the mandibles (supposing them to be in contact with each other in repose) is evenly convex in the apical portion, the apex itself being quite straightly truncate, while in *Amarygmus* the surface is traversed from base to apex by a deep sharply defined sulcus, the impression of which at the apex interrupts the continuousness of its truncation.

Turning to the species named up to the present time, we are encountered by the principal difficulty in dealing with the revision of the *Amarygmides*. The number of names that have been used is 67. Of these I am able to say confidently that 11 have

mandibles bifid at the apex, viz. *convexus*, Pasc., *exilis*, Pasc., *foveolatus*, Macl., *striatus*, Macl., *torridus*, Pasc., *tyrrhenus*, Pasc., *variolaris*, Pasc., *tardus*, Blackb., *uniformis*, Blackb., *diaperioides*, Blackb., and (although my identification of this is possibly open to doubt) *pivicornis*, Hope. This leaves 56 which probably appertain to *Chalcopterus* so far as I have been able to ascertain. Of these 56 there are 10 which I feel confident that I have not seen, viz., *convexiusculus*, Macl., *cupido*, Pasc., *cupricollis*, Hope, *ellipsoides*, Pasc., *indigaceus*, Pasc., *minutus*, Pasc., *pusillus*, Pasc., *semisus*, Pasc., *sulcipennis*, Hope, *tarsalis*, Pasc. Of the following 7 I have examples of whose identification I feel considerable doubt; but I am confident that if my identification of them is not correct I have not seen the species, viz., *cupreus*, Fab., *grandis*, Macl., *maurulus*, Pasc., *obtusus*, Pasc., *obsoletus*, Macl., *vinosus*, Pasc., *semiticus*, Pasc. Of the remaining 38 species 9 are, I have little doubt, synonyms, viz., *caelestis*, Pasc., and *lavicollis*, Blessig = *cyanipennis*, Hope; *venereus*, Gmel. = *cupreus*, Fab.; *purpureus*, Germ. = *anthracinus*, Hope; *rugosus*, Germ. = *sulcipennis*, Hope; *Howitti*, Pasc., and *affinis*, Blessig = *cupripennis*, Hope; *rufipes*, Macl. = *nigritarsis*, Pasc.; *triangularis*, Haag-Rut. = *semiticus*, Pasc. The following six I am obliged to disregard as being described in such fashion that it is impossible to form any opinion concerning them, viz., *resplendens*, Boisd., *puncticollis*, Hope, *smaraydulus*, Fab., *tristis*, Fab., *velutinus*, Macl., *viridicollis*, Macl. The following two identifications may be regarded as *probable*, viz., *bicolor*, Fab., and *columbinus*, Boisd., with *cupripennis*, Hope, and *cyanipennis*, Hope, in which case Hope's names will become synonyms. Thus there are 22 names that I regard as representing good species known to me and belonging to *Chalcopterus*, 17 (among which are probably a few that do not belong to *Chalcopterus*) that I have identified doubtfully or not at all, but all of which are likely to be good species, and 17 that are either mere names of practically undescribed insects or else, probably, synonyms.

It will be well to remark that in identifying Hope's, Germar's, and Blessig's species, I have possessed the advantage of a personal

knowledge of the fauna of the localities in which the types were collected. Even with this assistance I have not been able to identify all the species of the former two of those authors.

Beginning with Germar,—*fervens* is unmistakable, as it is mainly characterised by its undersurface being brilliantly iridescent (a very rare character in *Chalcopterus*), and a species presenting this character occurs somewhat commonly all over S. Australia, and agrees very well with the description of *fervens* in all respects. Germar describes *purpureus* as having its elytra "*tenuiter striato-punctatis*," its puncturation less fine than that of *fervens*, and its upper surface (except the head) entirely variegated with metallic colours; these are fairly definite characters, and as there is a species (and only one) known to me (it is common all over S. Australia) found in the habitat of Germar's insects presenting these characters I feel no doubt about this identification. Germar describes *fastuosus* as distinguished by the unusual characters of the seriate puncturation of the elytra being somewhat obsolete and the puncturation of the prothorax stronger than in its allies and crowded near the lateral margins, characters that are combined in one, and one only, of the species before me that occur (and it, too, occurs commonly) in the locality where Germar's species were collected. The above three species also agree in size, &c., with the other characters as stated by Germar under the names mentioned. The other of Germar's names (*rugosus*) its author assigns to a species which he describes as having the prothorax black, the elytra "*rugosely striate*," and the interstices transversely rugulose; I have seen no *Amarygmid* to which this description would apply, unless it be a remarkable form in my collection that I am disposed to regard as a monstrosity and to refer to *C. polychromus*, Pasc., with which it seems absolutely identical in every respect, except that the elytra are sculptured in a fashion quite unlike that of any other *Amarygmid* that I have seen. I have met with another example with this same peculiarity present in a much feebler degree. Unless it be the case that the descriptions of *Amarygmus rugosus*, Germ., (and *A. sulcipennis*, Hope, which Germar thought likely to be the

same species), are founded on the above-mentioned insect, I am convinced that I have not seen it.

Passing to Mr. Hope's species, they are six in number (besides *sulcipennis* already referred to). Of these *cupripennis* is, I think, quite unmistakable, the commonest of all the *Amarygmids* in Southern Australia agreeing well with Mr. Hope's brief description. *C. anthracinus* is no doubt a variety, as I have not seen any S. Australian *Amarygmid* which is habitually of uniform black colour; I have, however, met rarely with black examples of *C. purpureus*, Germ., (as well as of several other species), and as Mr. Hope says that the elytra are striate in *C. anthracinum*, I believe it to be this black var. of *purpureus*; the name, however, is so inappropriate to an insect of which 99 out of every hundred specimens are brilliant with metallic colours that it would be a matter of regret if the identification were established finally and Hope's name had to take precedence. The identity of *C. picicornis* could hardly be determined on the description alone, which would fit a good many species, but as I have seen only one occurring near Adelaide that it agrees with, I think that one is probably the true *picicornis*; it has bifid mandibles and therefore must not be referred to *Chalcopterus*. *C. longipennis* I have discussed below in re-describing the insect to which I believe the name to refer. As regards *C. cyanipennis*, a species widely distributed (but I believe not common) in Southern Australia fits the description very well, and I regard its identification as quite satisfactory. *C. cupricollis* is from an island off the north coast of Australia, and I have seen nothing that fits the description. Regarding *C. puncticollis* I am quite at a loss, as I know nothing (apart from the insects already referred to) that agrees with the description; the only suggestion I can make is that it may be a variety of *purpureus*, Germ., in which case Hope's name would take precedence.

M. Blessig's species are all well described and, I think, quite recognisable; *C. iridicolor* is a very well marked insect; *C. variabilis* may possibly be identical with one of Boisduval's species; *C. affinis*, I think there is hardly a doubt, is a variety

of *C. cupripennis*, Hope, to which M. Blessig says it is "extremely close" (I have specimens from Melbourne agreeing with the description of *affinis* which are certainly vars. of *cupripennis*); *C. levicollis* I have no doubt is identical with *cyanipennis*, Hope, from which M. Blessig says he can only distinguish it by its being, according to Hope's measurement, a less slender insect.

As regards the species described by Fabricius, it is unfortunate that we do not know their exact habitats. In the case of one of them (*tristis*), it seems doubtful whether the habitat is in Australia. The types of the others are said to have been in Sir Joseph Banks' collection, from which it may be inferred that they were collected by Captain Cook's expedition. The descriptions are too brief in most cases for certain identification, *amethystinus* (owing to its remarkable colouring) being alone capable of confident recognition; *Erotylus cupreus* is very likely to be identical with a large *Chalcopterus* from N. Queensland that Mr. French has sent me, and it is probable that *Cnodulon bicolor* is the same species as *Chalcopterus (Cnodulon) cupripennis*, Hope. The other species of Fabricius (*Helops smaragdulus*) I cannot recognise in any *Amarygnid* that I have seen.

Fortunately M. Boisduval described only two species. The description of one of them (*Amarygnus columbinus*), consisting of exactly ten words, reads much as if it were founded on the same insect as *Chalcopterus (Cnodulon) cyanipennis*, Hope; that of the other (*A. resplendens*) consists of thirteen words, and does not suggest any particular species to my mind; though reasoning from *probability* (of locality, &c.) would perhaps indicate *vinosus*, Pasc., as likely to be the subject of the description, and I do not know that there is anything among Boisduval's thirteen words altogether irreconcilable with that supposition; but unless—and until—the types can be examined, Boisduval's *Amarygnides* ought to be treated as non-existent.

The two descriptions by Mr. W. S. Macleay in "King's Survey" are not recognisable.

In respect of the species published since 1861—by Mr. Pascoe, Sir William Macleay, and myself—the difficulties are not so great

as those concerning the earlier descriptions. Here Mr. Masters has come to my help with great kindness and has lent me specimens which he knows to be identical with many of those on which descriptions were founded.

In this first instalment of the present memoir I offer to the Society descriptions of a number of new species of *Chalcopterus*. In the second and concluding instalment I hope to supply a tabular statement of the distinctive characters of these new species and of most of the species previously described, together with a revision of the much less numerous species of *Amarygmus*.

CHALCOPTERUS CLYPEALIS, sp. nov.

♂ Sat ovalis; sat convexus; minus nitidus; niger, elytris obscure viridibus haud versicoloribus, epipleuris purpureomicantibus; capite sat fortiter punctulato fronte media lævi, clypei parte ante canthos oculares postice fortiter emarginata; oculis quam antennarum articuli basalis longitudine multo magis remotis; sulcis ocularibus nullis; antennis corporis dimidio parum brevioribus, apicem versus sat incrassatis, articulo 3^o quam 1^{us} 2^{us}que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti parum breviori, articulis 8-10 quam latioribus haud duplo longioribus; prothorace quam longiori (et postice quam antice) vix duplo latiori, modice convexo, antice bisinuatim leviter emarginato, a basi anterius sat æqualiter sat arcuatim angustato, sparsim obsolete vix subtiliter punctulato, basi arcuatim bisinuata, angulis anticis obtusis; elytris subtiliter seriatim punctulatis (seriebus postice vix obsolescentibus, latera versus paullo magis fortiter impressis), interstitiis planis quam series (seriebus lateralibus exceptis) parum minus fortiter punctulatis; prosterno haud sulcato; metasterno nitido subtiliter punctulato, episternis opacis sparsim subtilissime vel vix manifeste punctulatis; abdomine nitido minus subtiliter punctulato et sat fortiter longitudinaliter rugato; femoribus anticis antice subtiliter sat sparsim punctulatis, tarsis subtus breviter nigro-setosis. [Long. $5\frac{1}{3}$, lat. $2\frac{1}{3}$ lines.

This species is extremely like some varieties of *C. cupripennis*, Hope, and may possibly prove to be itself a variety of that insect. It differs, however, from all the examples I have seen that I can refer to *cupripennis* in two characters that seem to be important, viz., the structure of the head and the sculpture of the elytra. In *cupripennis* (and in most *Chalcopteri*) the forehead is divided from the clypeus by a fine suture which passes (arched slightly hindward) immediately in front of the antennal tubers, in front of which stands the clypeus appearing from its convexity to be a little tumid; in *clypeatus*, however, the space immediately in front of the clypeal suture is a flat continuation of the plane of the clypeus, which space is strongly arched forward in front, and in front of it the clypeus becomes suddenly tumid with its hinder side deeply concave where the flattened space mentioned above cuts into it. As regards the sculpture of the elytra, I have not seen among the examples I refer to *cupripennis* any in which the punctures of the longitudinal series and those of the interstices are so nearly alike as they are in this insect, especially near the suture where the punctures of the series are scarcely distinct from those of the interstices; whereas in *cupripennis* (although the seriate and interstitial punctures are undoubtedly less distinct from each other than in the majority of *Chalcopteri*) even the series nearest the suture is perfectly apparent to a casual glance.

The shape of this species is different from that of most of its congeners, though agreeing with that of *C. cupripennis* and several others. If it be looked at from the side it will be seen that the highest point in the curve which forms the upper outline is exceptionally near to the base of the elytra, so that the posterior declivity is very gradual indeed, and begins far in front of the middle. The puncturation of the prothorax is very faintly impressed and not close, but it is not particularly fine as compared with that of some *Chalcopteri*.

S. Australia; near Adelaide.

C. SIMIUS, sp. nov.

Late ovalis, fortiter convexus; minus nitidus; niger, elytris rubro-cupreis; capite (hoc haud canaliculato) oculis antennis

(harum articulo 3^o manifeste longiori) prothoraceque fere ut *C. cupripennis*, Hope; elytrorum quam *C. cupripennis* seriebus minus fortiter punctulatis, interstitiis magis fortiter punctulatis; cetera ut *C. cupripennis*.

[Long. 6, lat. 3 $\frac{3}{5}$ lines.

Very like *C. cupripennis* in many respects, but differing much in shape, being very wide with strongly rounded sides and very convex. Viewed from the side the outline curve of the elytra is very strong, so that the elytra seem to be strongly gibbous behind the base (as in *C. semiticus*, Pasc.). There is very little difference between the seriate punctures of the elytra and those of the interstices, so that the former are very inconspicuous. This species may be at once separated from *C. semiticus*, *inter alia*, by its widely separated eyes and much more strongly punctured elytral interstices.

N. Queensland.

C. CUPRIPENNIS, Hope.

Sat late ovalis; sat nitidus; niger, elytris cupreo-æneis; capite minus crebre subtiliter (spatio inter oculos lævigato excepto) punctulato, in medio longitudinaliter plus minusve perspicue canaliculato; oculis quam antennarum articuli basalis longitudine multo magis inter se remotis; sulcis ocularibus nullis; antennis apicem versus manifeste incrassatis, quam corporis dimidium paullo (♂) vel sat multo (♀) brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti paullo longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes paullo brevioribus; prothorace quam longiori fere duplo (postice quam antice tribus partibus) latiori, leviter minus crebre nec subtilissime punctulato, antice sat fortiter bisinuato, a basi antrorsum arcuatim angustato, basi media sat late sublobata, angulis anticis obtusis posticis (superne visis) subacutis; elytris sat subtiliter seriatim punctulatis, interstitiis planis, sat crebre subtiliter leviter (♀) vel minus leviter (♂) punctulatis; prosterno medio plus minusve distincte carinato; metasterno in medio sat crebre sat

subtiliter, latera versus minus crebre, in episternis (his subopacis) subtilissime minus perspicue, punctulato; abdomine minus sparsim minus subtiliter punctulato et sat fortiter rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali quam ceteri conjuncti parum breviori.

[Long. $5-6\frac{1}{2}$, lat. $3-3\frac{1}{2}$ lines.

The head is very nitid, and is impressed with a fine more or less distinct line down the middle, for some distance on either side of which the surface is lævigata; the rest of the head is finely but very distinctly punctured, the punctures tending to become stronger and less close from the front of the clypeus hindward. The space between the eyes is about $\frac{2}{5}$ of a line wide. The puncturation of the prothorax is faintly impressed and therefore not at all conspicuous, but is not so *fine* as in many species in which it is more conspicuous. The surface of the prothorax is not less nitid than that of the elytra. The seriate punctures of the elytra are finer than in most *Chalcopteri*, being in fact so little larger than the punctures of the interstices (especially in the male) as to appear somewhat *indistinct*. They are generally slightly more closely placed in the series in the ♀ than in the ♂. In (say) the middle part of the 4th series from the suture there are in a length equal to the width of an interstice about four punctures in the male and about (or scarcely) five in the female. The interstices are absolutely flat throughout. The antennæ scarcely differ sexually, but the general form being distinctly more elongate in the female, the antennæ in that sex are shorter in comparison of the total length. I do not know any species of *Chalcopterus* in which the eyes are more widely separated.

The above is a description of the ordinary form of *cupripennis*, which occurs abundantly all over Southern Australia. It is an exceedingly variable species however in respect of the colour of the elytra, special colouring appearing to predominate in certain localities. Examples from the interior of S. Australia (Port Augusta, &c.) usually have blue elytra with purplish reflections,

but I can find no other difference. From various localities in Victoria and S. Australia I have seen examples with dark green elytra which are somewhat less nitid (I take this to be *affinis*, Blessig). From Western Australia I have a specimen with the elytra bright green and very nitid; as this form is a trifle more elongate and less convex (the summit of the outline curve of the elytra viewed from the side being scarcely in front of the middle) it is possible that it represents a distinct species. Examples from the Victorian Alps are of the typical form. Queensland specimens have elytra inclining to *reddish*-copper colour, but do not seem to differ otherwise. *Amarygmus Howitti*, Pasc., seems to be the typical form. Specimens from the Fraser Range (taken by the Elder Exploring Expedition) differ from the type only in having their elytra of a purplish tone.

C. VERSICOLOR, sp. nov.

Ovalis; subelongatus; nitidus; niger, capite prothoraceque viridi aureo purpureoque (elytris aureo purpureoque) micantibus; capite crebre sat fortiter punctulato (parte media inter antennis laevi excepta), oculis quam antennarum articuli basalis longitudine paullo magis remotis; sulcis ocularibus nullis; antennis corporis dimidio sat brevioribus sat robustis, articulo 3^o quam 1^{us} 2^{us}que conjuncti paullo longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes paullo brevioribus; fronte æquali; prothorace quam longiori plus quam tribus partibus (postice quam antice ut 5 ad 3) latiori, sat crebre sat profunde (nihilominus sat subtiliter) punctulato, antice sat profunde emarginato, a basi antrorsum arcuatim angustato, basi leviter bisinuata, angulis anticis distinctis subprominulis posticis obtusis; elytris æqualiter sat subtiliter seriatim punctulatis, interstitiis planis crebre distincte punctulatis; prosterno late concavo (parte concava in medio plus minusve elevata); metasterno episternisque nitidis subfortiter nec crebre punctulatis, illo oblique strigato; abdomine sat fortiter punctulato et longi-

tudinaliter strigato; femoribus anticis antice sparsim minus perspicue punctulatis; tarsis subtus nigro-setosis.

[Long. $5\frac{1}{5}$ - $6\frac{1}{2}$, lat. $2\frac{1}{5}$ - $3\frac{1}{2}$ lines.

The extension of the metallic colouring to the head (which seems constant) is an unusual character. The combination of eyes widely separated (not much less widely than in *C. cupripennis*) and the prothorax with its front margin not less than $\frac{3}{5}$ as wide as the base places this species among a group of very limited number. In that group the metallic head, non-striate elytra, comparatively large size, will distinguish the present species. The sculpture of the prosternum seems variable—indeed I find it an unsatisfactory character in most of the *Chalcopteri*; in this species the prosternum is widely concave down the middle (at any rate in the front part), but the middle of this sulcus is more or less convex, so that a kind of keel runs along it which in some examples is little noticeable and in others almost fills up the concavity. The sculpture of the elytra is almost exactly as in *C. cupripennis*. The elytral outline viewed from the side is an even gentle curve with its summit at (or almost behind) the middle.

S. Australia; basin of Lake Eyre.

C. TINCTUS, sp.nov.

Ovalis; nitidus; convexus; niger, prothorace elytrisque versicoloribus, cyaneo- et purpureo-micantibus; capite (parte media inter antennis levi excepta) crebre sat fortiter punctulato; oculis quam antennarum articuli basalis longitudine vix magis inter se remotis; sulcis ocularibus nullis; antennis quam corporis dimidium vix (σ) vel sat manifeste (ρ) brevioribus, apicem versus vix incrassatis, articulo 3^o quam 1^{us} 2^{us} que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti sat breviori, articulis 8-11 quam præcedentes manifeste brevioribus; prothorace quam longiori (et postice quam antice) fere duplo latiori, sat crebre sat profunde nihilominus sat subtiliter) punctulato, antice sat fortiter bisinuato, a basi antrorsum arcuatim angustato, basi media sat late sublobata, angulis anticis obtusis posticis fere rectis; elytris subtiliter

(latera versus paullo minus subtiliter) seriatim punctulatis, interstitiis planis sparsim (σ) vel minus sparsim (σ) distincte punctulatis; prosterno medio sulcato; metasterno in medio et in episternis sat crebre, in parte intermedia sparsim, punctulato; abdomine crebre punctulato et rugato; femoribus anticis antice perspicue sat crebre punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali ceteris conjunctis longitudine æquali. [Long. $5\frac{1}{2}$, lat. $3-4\frac{1}{2}$ lines.

This species bears considerable general resemblance to *C. polychromus*, Pasc., but is of more robust build, with the eyes much less widely separated from each other, the seriate punctures of the elytra clearly traceable quite to the base, &c. Compared with *C. cupripennis*, the interval between the eyes is only about half as wide, the antennæ are more slender and filiform, the prothorax is a little less transverse, the sculpture of the elytra is not much different, the legs (and especially the tarsi) are much more elongate, and the colour of the prothorax and elytra in all the examples I have seen is bright purple changing in certain lights to cyaneous. The outline curve of the elytra viewed from the side is rather strong, with its summit at about the middle of its length. There are about four punctures (in the elytral series exclusive of the nearest two to the suture) in a length equal to the width of an interstice.

S. Australia.

C. DIFFICILIS, sp. nov.

Ovalis; subelongatus; nitidus; niger, elytris viridi-aureo- et purpureo-versicoloribus; capite aqualiter distincte punctulato; oculis quam antennarum articuli basalis longitudine paullo magis inter se remotis; sulcis ocularibus fere nullis; antennis (σ ?) quam corporis dimidium multo brevioribus, apicem versus paullo incrassatis, articulo 3^o quam 1^{us} 2^{us} que conjuncti haud longiori quam 4^{us} 5^{us} que conjuncti parum breviori, articulis 8-10 quam præcedentes vix brevioribus; prothorace quam longiori (et postice quam antice) fere duplo

latiori, sat crebre minus subtiliter nec profunde punctulato, antice bisinuato, a basi antrorsum (superne viso) arcuatim angustato, basi media sublobata, angulis anticis obtusis posticis (superne visis) subacutis; elytris subtiliter (fere ut *C. cupripennis*) seriatim punctulatis, interstitiis planis (quam *cupripennis* magis) subtiliter sparsius punctulatis; prosterno medio carinato; metasterno et episternis sparsim subtilissime punctulatis, illo ad latera oblique rugato; abdomine fere ut metasternum punctulato et distincte rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus nigrosetosis, posticorum articulo basali ceteris conjunctis multo brevioribus. [Long. $5\frac{1}{2}$, lat. $2\frac{4}{5}$ lines.

This is a somewhat difficult species to place in my tabulation, owing to its having slight (but only slight) indications of ocular sulci and elytral interstices punctured somewhat less strongly than in the allies of *cupripennis*, but decidedly more strongly than in *letus*, so that it appears somewhat intermediate; the sides of its prothorax, moreover, viewed from above, are less strongly arcuate than in most species in which the form of the prothorax is what I have called "normal," so that it tends a little towards the group with their prothorax trapezoidal. In colouring and puncturation of the prothorax and elytral series it resembles a very bright specimen of *C. cupripennis* but its head is evenly punctured, its prothorax more narrowed in front, its eyes more approximate, its antennæ shorter, its elytral interstices more finely punctured, and the basal joint of its hind tarsi much shorter. It also resembles *fervens*, Germ., but differs from that species *inter alia* by its black head, prothorax and undersurface, its more approximate eyes, much shorter antennæ, and the much shorter basal joint of its hind tarsi. The outline curve of its elytra (viewed from the side) is moderately strong, with its summit a little in front of the middle. It is not at all like *C. rugosipennis*, Macl., next to which the exigencies of tabulation require it to be placed.

S. Australia; McDonnell Ranges; sent by C. French, Esq.

C. LÆTUS, sp.nov.

Ovalis; subelongatus; nitidissimus; niger, capite obscure cupreo prothorace minus nitido cyaneo, elytris splendide viridi-aureo et purpureo-iridescentibus; capite crebre æqualiter punctulato; oculis subapproximatis quam antennarum articuli basalis longitudine fere minus inter se remotis; sulcis ocularibus nullis; antennis quam corporis dimidium sat brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti sat breviori, articulis 8-10 quam præcedentes parum brevioribus; prothorace quam longiori (et postice quam antice) fere duplo latiori, sparsim obsolete vix manifeste punctulato, antice sat fortiter bisinuato, a basi antrorsum (superne viso) æqualiter arcuatim angustato, basi bisinuata, angulis anticis obtusis; elytris sat subtiliter fere ut *C. cupripennis* sed multo minus crebre) seriatim punctulatis, seriebus suturam versus et postice magis subtilibus, interstitiis planis sparsim subtilissime vix perspicue punctulatis; prosterno medio concavo; metasterno subtilissime punctulato et oblique leviter rugato, episternis minus nitidis obsolete punctulatis; abdomine sparsim sat subtiliter punctulato et longitudinaliter rugato; femoribus anticis sparsim subtilissime punctulatis; tarsis subtus nigrosetosis, posticorum articulo basali ceteris conjunctis (unguiculis exceptis) sat æquali. [Long. 6, lat. 3½ lines.

A somewhat longer and less robust species than *C. cupripennis*, with its elytral outline (viewed from the side) moderately arched, the summit of the arch rather behind the middle. The elytral series of punctures are exceptionally conspicuous owing to their individual punctures not being crowded together, and the interstices being so finely punctulate as to appear lævigata unless under a very strong lens. The elytra of this species are among the most nitid and brilliantly iridescent in the genus.

Two examples in my collection, said to be from N. S. Wales, must certainly, I think, be attributed to this species; their

elytral interstices are a trifle more strongly punctulate, but I can find no other distinction whatever.

S. W. Australia.

C. JUVENIS, sp.nov.

♂ (?). Elongato-ovalis ; sat convexus ; nitidus ; niger, prothorace elytrisq̄ue cyaneis purpureo-micantibus ; capite sat fortiter sat æqualiter punctulato, vertice breviter longitudinaliter sulcato (sulci fundo lævi) ; oculis quam antennarum articuli basalis longitudine paullo magis remotis ; sulcis ocularibus nullis ; antennis corporis dimidio parum brevioribus, apicem versus parum incrassatis, articulo 3^o quam 1^{us} 2^{us}que conjuncti manifeste longiori quam 4^{us} 5^{us}que conjuncti sat breviori, articulis 8-10 quam præcedentes paullo brevioribus parum latioribus ; prothorace quam longiori (et postice quam antice) tribus partibus latiori, minus sparsim minus subtiliter punctulato, cetera ut *C. clypealis* ; elytris seriatim (suturam versus subtilius, latera versus magis fortiter, apicem versus vix minus fortiter) punctulatis, interstitiis planis sparsim subtilissime punctulatis ; prosterno haud sulcato ; metasterno fere lævi, episternis sparsim subtilissime punctulatis ; abdomine sparsim subtiliter punctulato et longitudinaliter rugato ; pedibus ut *C. clypealis*. [Long. 5, lat. 2 $\frac{3}{8}$ lines.

Compared with *C. cupripennis*, Hope, this species is narrower and more parallel, its antennæ less thickened towards the apex, and having the third joint proportionally a little shorter, the prothorax less transverse, more strongly punctured and brightly coloured, the elytral seriate punctures a little stronger and not quite so closely placed (appearing very much more distinct owing to the interstices being almost lævigate), the eyes not quite so remote, no lævigate space between the eyes on the front part of the forehead, the vertex (in the typical example) with a short distinct lævigate sulcus, &c.

S. Australia ; Morgan.

C. CARUS, sp.nov.

♀ (?). Elongato-ovalis; nitidus; niger, prothorace elytrisque læte cyaneis, purpureo-micantibus; capite minus crebre subfortiter punctulato; oculis quam antennarum articuli basalis longitudine magis inter se remotis; sulcis ocularibus nullis; antennis apicem versus manifeste incrassatis, quam corporis dimidium sat brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes paullo brevioribus; prothorace quam longiori (et postice quam antice) vix duabus partibus latiori, sparsim obsolete punctulato, antice sat fortiter bisinuato, a basi antrorsum sat arcuatim angustato, basi media sat late sublobata, angulis anticis distinctis vix subacutis posticis obtusis: elytris sat subtiliter seriatim punctulatis, interstitiis planis vix perspicue punctulatis; prosterno medio sulcato; metasterno (episternis inclusis) sparsim subtilissime punctulato; abdomine rugato et sat subtiliter punctulato; femoribus anticis antice sparsim sat subtiliter punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali quam ceteri conjuncti fere longiori.

[Long. $4\frac{1}{2}$, lat. $2\frac{1}{3}$ lines.

This species is difficult to place under the system I have adopted in tabulating the *Chalcopteri*, as the width of its prothorax in front is just about $\frac{3}{5}$ of the width at the base. Such difficulties are inevitable in any tabulation of a large number of closely allied forms. I have decided to place this species among those with the prothorax less narrowed anteriorly. If it were placed among those with the prothorax anteriorly *more* narrowed it would stand beside *C. modestus*, which has eyes much less distant from each other and the punctures of the lateral series on the elytra much larger.

Compared with *C. cupripennis* the present insect has eyes a little less widely separated, prothorax less transverse, seriate punctures of elytra not much different, interstices much less punctured (all but impunctate), basal joint of hind tarsi more

elongate, &c., &c. The colour of the head and prothorax in the typical example is a uniform bright blue in some lights, changing to purplish from certain points of view.

W. Australia; Eucla district.

C. SPARSUS, sp.nov.

♂. Sat late ovalis, postice sat acuminatus; sat convexus; sat nitidus; niger elytris roseo-cupreis (exemplorum nonnullorum certo adspectu viridi-micantibus); capite æqualiter crebre subfortiter punctulato; oculis inter se sat approximatis; sulcis ocularibus nullis; antennis corporis dimidio parum brevioribus, apicem versus vix incrassatis, articulo 3^o quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti multo breviori, articulis 8-10 quam præcedentes parum brevioribus; prothorace quam longiori (et postice quam antice) duplo latiori, modice convexo, antice leviter bisinuatim emarginato, a basi antrorsum sat æqualiter sat arcuatim angustato, sat opaco, vix perspicue punctulato, basi media anguste sublobata, angulis anticis obtusis; elytris subtiliter (fere ut *C. cupripennis*) seriatim punctulatis (serierum lateralium puncturis paullo magis fortiter impressis), interstitiis planis sparsim subtilissime punctulatis; prosterno medio sulcato; metasterno sat nitido sublævi, episternis minus nitidis vix distincte punctulatis; abdomine vix manifeste punctulato obscure longitudinaliter strigato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus breviter nigro-setosis. [Long. 5½-6½, lat. 3-3½ lines.

Resembles *C. cupripennis* in colouring—also in shape, but having the elytra even more strongly convex longitudinally (*i.e.*, as viewed from the side). The seriate punctures of the elytra are not in reality much stronger than in *cupripennis*, but the absence of distinct puncturation on the interstices makes them appear infinitely more distinct than they do in *cupripennis*, where they are much obscured by the conspicuousness of the puncturation of the interstices. The eyes are very much less separated than those of *cupripennis*.

N. Territory of S. Australia.

C. MODESTUS, sp.nov.

♀ (?). Sat late ovalis; minus nitidus; niger, vix picescens, elytris purpureis, cyaneo-micantibus; capite crebre sat æqualiter minus subtiliter punctulato, oculis quam antennarum articuli basalis longitudine fere minus inter se remotis; sulcis ocularibus nullis; antennis corporis dimidio vix longioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes vix brevioribus; prothorace quam longiori (et postice quam antice) duplo latiori, sat opaco, obsolete vix crebre punctulato, antice bisinuato, a basi antrorsum (superne viso) æqualiter arcuatim angustato, basi bisinuata, angulis anticis obtusis; elytris fortiter seriatim punctulatis, puncturis in seriebus minus crebre positis a serierum lateralium parte mediana antrorsum retrorsum et suturam versus gradatim magis subtilibus, interstitiis planis leviter vix perspicue nec crebre punctulatis; prosterno medio leviter concavo; metasterno medio subtiliter, episternis vix perspicue, punctulatis; abdomine vix perspicue punctulato leviter longitudinaliter rugato; femoribus anticis sparsim subtilissime punctulatis; tarsis subtus nigro-setosis, posteriorum articulo basali ceteris conjunctis (unguiculis exceptis) fere longiori.

[Long. $3\frac{1}{2}$, lat. $2\frac{1}{2}$ lines.

A very distinct species. The punctures in the middle of the lateral series (where two each in adjoining series form the corners of a square) are much larger than any on the elytra of *C. cupripennis*, but they are gradually smaller in all directions, so that the punctures near the base, the apex, and the suture are about the same size as those of *cupripennis*, and as they become smaller they are more closely placed. The space between the eyes is very much narrower than in *C. cupripennis*.

N. Queensland; also Thursday Island; sent by C. French, Esq.

C. VIGILANS, sp.nov.

Ovalis, subelongatus; minus nitidus; niger, exempli typici prothorace cyaneo-micanti elytris violaceo-purpureis (his ad

latera viridi-micantibus); capite sat crebre sat æqualiter distincte punctulato; oculis magnis approximatis quam antennarum articuli 2ⁱ longitudine haud magis inter se remotis; sulcis ocularibus nullis; antennis (exempli typici) carentibus, articulis basalibus 2 exceptis; prothorace quam longiori (et postice quam antice) vix duplo latiori, leviter subtiliter punctulato, antice sat fortiter bisinuato, a basi antrorsum æqualiter arcuatim angustato, basi bisinuata, angulis anticis obtusis; elytris subtiliter (quam *C. cupripennis* paullo magis subtiliter) sat crebre seriatim punctulatis, seriebus apicem versus obsolescentibus, interstitiis sparsim subtilissime vix perspicue punctulatis; prosterno (exempli typici) leviter canaliculato; metasterno (episternis inclusis) fere lævi; abdomine leviter longitudinaliter rugato vix perspicue punctulato; femoribus anticis sparsim subtilissime punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali ceteris conjunctis (unguiculis exceptis) sat æquali.

[Long. 6, lat. 3 lines.

This insect is distinguished from nearly all its congeners by the distance between its eyes being not greater than the length of the 2nd joint of its antennæ. Viewed from the side the outline of the elytra is a moderately strong curve, the summit of which is about at the middle. Compared with *C. cupripennis*, Hope, this species is narrower, more elongate, and of less robust appearance, with the punctures of the prothorax much finer, the seriate punctures of the elytra a little finer, and those of the elytral interstices scarcely discernible except under a very strong lens.

N. Territory of S. Australia.

C. BELLUS, sp.nov.

♂ (?). Ovalis; sat convexus; minus nitidus; niger, elytris cæruleis, prothorace vix cæruleo-micanti; capite obsolete sparsim (clypeo verticeque magis crebre minus obsolete) punctulato; oculis quam antennarum articuli basalis longitudine vix magis remotis; sulcis ocularibus nullis; antennis robustis corporis dimidio longitudine sat æqualibus, apicem

versus sat incrassatis, articulo 3° quam 1^{us} 2^{us}que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti parum breviori, articulis 8-10 quam præcedentes (3° excepto) nullo modo brevioribus; prothorace quam longiori (et postice quam antice) duabus partibus latiori, obsolete (latera versus vix manifeste) sat crebre punctulato, antice fere truncato, cetera ut *C. clypealis*; elytris seriatim sat æqualiter sat fortiter (postice magis subtiliter) punctulatis, interstitiis planis sparsim vix manifeste punctulatis; prosterno haud sulcato; corpore subtus toto lævigato, abdomine haud strigoso; femoribus sublævigatis, tibiis sparsim punctulatis; tarsis subtus nigro-setosis. [Long. 6, lat. 3 lines.

The prothorax is comparatively small (its width is to the elytra as 5 to 8); its width only exceeding the length by about $\frac{2}{3}$ of the latter furnishes a good distinction from many species. The punctures of the elytral series are much larger than those of *cupripennis*, and scarcely so large as those in the juxta-sutural series in *punctipennis*, Macl.; they are rather closely placed in the series. The interstices (as in the preceding 3 species) are absolutely flat throughout. This species bears considerable resemblance to the insect which I take to be *C. celestis*, Pasc., but differs by its bluish-green and by no means impunctate prothorax, its much stouter antennæ, eyes much less approximate, and not bordered within by sulci, &c. An example from Thursday Island has elytra more purplish in colour.

N. Queensland; also Thursday Island.

C. BREVIPES, sp. nov.

Sat cylindricus; sat nitidus; niger, prothorace plus minus aureo-micanti, elytris læte versicoloribus (coloribus aureis purpureis viridibusque ornatis); capite crebre sat æqualiter (postice paullo sparsius) subfortiter punctulato; oculis quam antennarum articuli basalis longitudine vix magis inter se remotis; sulcis ocularibus fere nullis; antennis corporis dimidio sat (♂) vel multo (♀) brevioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti manifeste longiori quam 4^{us} 5^{us}que

conjuncti multo breviori, articulis 8-10 quam præcedentes paullo (♂) vel multo (♀) brevioribus; prothorace quam longiori duabus partibus (postice quam antice fere duplo) latiori, distincte inæqualiter (subacervatin) punctulato, antice leviter emarginato, lateribus (superne visis) a basi antrorsum rotundatim convergentibus, basi media sat anguste sublobata, angulis anticis obtusis; elytris æqualiter sat subtiliter (quam *cupripennis*, Hope, paullo minus subtiliter) seriatim punctulatis, interstitiis planis subtilius suberebre punctulatis; prosterno minus fortiter carinato; metasterno distincte punctulato et sat fortiter oblique rugato, episternis subopacis leviter indistincte punctulatis; femoribus anticis antice sparsim subtiliter punctulatis; tarsi subtus nigrosetosis, posticorum articulo basali quam 4^{us} parum longiori; abdomine sat crebre punctulato et longitudinaliter rugato.

[Long. 9, lat. $4\frac{2}{5}$ lines.

The puncturation of the elytra is much like that of *C. cupripennis*, but the seriate punctures are more distinct owing to there being a greater disparity between them and the punctures of the interstices. The eyes are considerably more approximate than in *cupripennis*. The shortness of the hind tarsi (and especially of their basal joint) is a conspicuous character.

Victoria; sent by C. French, Esq.

C. PLACIDUS, sp. nov.

Late ovalis; sat nitidus; supra viridis vel purpureus vel aureus, vel his coloribus intermixtis micans, corpore subtus antennis palpis pedibusque nigris; capite antice crebre postice sparsius punctulato, oculis quam antennarum articuli basalis longitudine vix minus inter se remotis, intus vix manifeste sulco marginatis; antennis quam corporis dimidium sat brevioribus, articulo 3^o quam 1^{us} 2^{us} que conjuncti sat longiori quam 4^{us} 5^{us} que conjuncti sat breviori, articulis 8-11 quam præcedentes sat brevioribus; prothorace sat convexo, quam longiori (et postice quam antice) duabus partibus latiori, distincte inæqualiter punctulato, lateribus a basi antrorsum (superne

visis) convergentibus, margine antico bisinuatum emarginato, angulis anticis obtusis parum productis posticis (superne visis) subrectis; elytris quam prothorax duabus partibus latioribus, modice convexis, seriatim punctulatis (seriebus antice oblitteratis), puncturis in seriebus crebris subtilibus, interstitiis distincte minus crebre punctulatis; prosterno medio concavo; metasterno toto (episternis inclusis) et abdomine subfortiter minus sparsim punctulatis; hoc longitudinaliter strigoso; femoribus anticis sat crebre sat fortiter punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali quam ceteri conjuncti haud breviori.

[Long. 8, lat. 5 lines.

A very distinct species on account of its wide form, the comparatively strong puncturation of its metasternum and femora, &c. The eyes are not really margined with a sulcus, but the space separating them (which is much narrower than in *C. cupripennis*, *fervens*, &c.) being slightly raised above the level of the margin of the eye causes a deceptive appearance of a very narrow sulcus. Viewed from the side, the curve of the outline of the elytra is strong and is very manifestly at its highest decidedly in front of the middle. The seriate punctures of the elytra are finer, and the interstitial stronger, than in *cupripennis*, so that the series are less distinct than in that species; near the front they are quite obliterated.

W. Australia; seems to be widely distributed.

C. FROGGATTI, sp.nov.

C. placido affinis; antennarum articulo 3° minus elongato; prothorace magis fortiter transverso, quam longiori fere duplo latiori, lateribus a basi ultra medium leviter hinc ad apicem sat fortiter convergentibus; elytris prothoracem latitudine minus antecedentibus; prosterno medio carinato; abdomine magis crebre punctulato; tarsorum posticorum articulo basali quam ceteri conjuncti paullo breviori.

[Long. 7, lat. 4 lines.

Besides the differences specified above, this species differs from all the examples known to me of *C. placidus* in colour, the prothorax being black with a faint coppery tone, and the elytra of a uniform reddish-copper colour with the suture greenish in certain lights, whereas in all the specimens of *C. placidus* I have seen the whole upper surface is blue or green, changing from certain points of view to purple or golden. The form of the prothorax is very like that of *C. fastuosus*, Germ., (but with the crowded lateral puncturation wanting). The prothorax being much less rapidly narrowed forward than that of *C. placidus* appears conspicuously more massive.

N. S. Wales ; taken near Maitland by Mr. Froggatt and generously presented to me.

C. PURPUREUS, Germ.

C. versicolori valde affinis ; differt forma angustiori, capite haud (vel vix) metallico-micanti, prothorace magis nitido, elytris perspicue (nec profunde) striatis, interstitiis leviter convexis. [Long. $4\frac{1}{2}$ - $6\frac{1}{2}$, lat. $2\frac{1}{3}$ - $3\frac{1}{5}$ lines.

The species forming the group to which this and *C. versicolor* belong are extremely closely allied *inter se*, and it is possible that they ought to be considered local races of a single type. The differences, however, such as they are, seem to be constant. I found *C. versicolor* plentifully (though I was able to take only a short series) on young shoots of *Eucalyptus* in the far North (basin of Lake Eyre), and all the specimens of it that I have examined seem to be quite identical, being oval in form, with the prothorax a little less nitid than the elytra, the head of a bright green colour, and the elytra, when carefully examined, not in the least striate, although the closeness of the seriate punctures in the rows makes them seem to a casual glance finely striate, with the interstices perfectly flat. *C. purpureus* is widely distributed and not uncommon in the southern part of S. Australia. It is a distinctly narrower and more elongate species with the head black or faintly tinged with copper colour, the prothorax very nitid and the elytra distinctly though finely striate, with their

interstices widely and gently convex. I suspect that *C. purpureus* is the insect from Port Lincoln that Mr. Pascoe refers to (Ann. Nat. Hist. 1870, p. 105) as a variety of *C. suturalis*, sibi, as I have frequently taken, at Port Lincoln, *C. purpureus* (coloured, as Mr. Pascoe describes the so-called var. of *suturalis*), but never anything more like *C. suturalis*. This (*C. suturalis*) is another species belonging to the same group, and was described by Mr. Pascoe on an example from Western Australia. Through the courtesy of G. Masters, Esq., of Sydney, I have been able to examine a specimen which he tells me was named *suturalis* by Mr. Pascoe, and which agrees well with the description. It is very close to *C. purpureus* in respect of all characters except the sculpture of the elytra (I attach no importance to the colour of the suture alluded to by Mr. Pascoe, as I find it to vary in *C. purpureus*), but its elytra are very deeply striate, with the interstices strongly elevated, evidently narrower than the interstices of *C. purpureus* and scarcely visibly punctured. It appears to me quite possible that *C. anthracinus*, described by Mr. Hope (Proc. Ent. Soc. 1842, p. 79) in a few words, quite insufficient for confident identification, may be a black var. of *C. purpureus* (I have seen a single black specimen of that insect), but I have no means of settling the point, and the application of the name *anthracinus* to an insect brilliantly shining with golden purple and green colours, because it was first named on a very rare black variety, seems so unnatural as almost to justify a change of name even if my suspicion should prove to be well founded.

C. VIVIDUS, sp. nov.

♀ (?). Elongato-ovalis ; sat nitidus ; niger, prothorace elytrisq̄ue versicoloribus, purpureo- cyaneo- viridi- et aureo-micantibus ; capite crebre subfortiter punctulato, parte mediana lævi ; oculis quam antennarum articuli basalis longitudine magis inter se remotis ; sulcis ocularibus nullis ; antennis apicem versus manifeste incrassatis, quam corporis dimidium sat brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti parum longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis

8-10 quam præcedentes paullo brevioribus ; prothorace quam longiori (et postice quam antice) fere duabus partibus latiori, minus crebre minus subtiliter punctulato, antice fortiter bisinuato, a basi antrorsum leviter arcuatim angustato, basi media sat late sublobata, angulis anticis distinctis subacutis posticis obtusis ; elytris sat subtiliter seriatim punctulatis, interstitiis planis distincte minus crebre punctulatis ; prosterno planato ; metasterno in medio subtilissime, ad latera et in episternis minus subtiliter sparsim punctulato ; abdomine subfortiter punctulato et rugato ; femoribus anticis antice sparsim minus subtiliter punctulatis ; tarsis subtus fulvo-setosis, posticorum articulo basali quam ceteri conjuncti parum breviori. [Long. 5, lat. $2\frac{2}{5}$ lines.

Bears a general superficial resemblance to *C. variabilis*, Blessig, but differs from it and from others allied to it by the very different shape of the prothorax, which in this species is distinctly less wide, at the base, than once and two-thirds the width of the front, and has its front margin very strongly bisinuate, with the front angles distinctly prominent and subacute, almost as in *C. micans*. It is distinguished from most of its congeners by the lateral carinæ of its prothorax being (not arched downwards but) almost straight as viewed from the side. Compared with *C. cupripennis* the interval between the eyes is about one-third narrower, the head and prothorax are decidedly more strongly punctulate, the punctures both of the series and the interstices are stronger, the episterna are distinctly punctulate, the prothorax of quite different form, &c., &c. The outline curve of the elytra is moderately strong with its summit about the middle of the length.

N. Queensland ; sent by Mr. French.

C. INTERMEDIUS, sp.nov.

Elongato-ovalis ; sat nitidus ; niger, elytris cupreis (certo adspectu viridi-micantibus) ; capite sat crebre sat fortiter punctulato, in medio anguste lævi ; oculis quam antennarum articuli basalis longitudine vix minus inter se remotis ;

sulcis ocularibus nullis; antennis apicem versus leviter incrassatis, quam corporis dimidium paullo brevioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti paullo longiori, quam 4^{us} 5^{us}que conjuncti sat breviori, articulis 8-10 quam præcedentes vix brevioribus; prothorace quam longiori quatuor partibus (postice quam antice fere tribus partibus) latiori, crebre minus subtiliter punctulato, antice fortiter sinuatim emarginato, a basi antrorsum leviter arcuatim angustato, basi media sat late sublobata angulis anticis distinctis subacutis posticis fere rectis; elytris subtiliter seriatim punctulatis (puncturis in seriebus minus crebre positis), interstitiis planis crebrius distincte punctulatis; prosterno medio carinato; metasterno (episternis inclusis) subtiliter punctulato; abdomine subtilius punctulato et distincte rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali quam ceteri vix breviori. [Long. 5, lat. 2 $\frac{3}{5}$ lines.

Belongs to a small group of species remarkable for their prothorax being wider in front than is usual in the genus, with the front angles prominent and well developed. Among the species of that group the present insect is distinguished by the following characters in combination:—prothorax having its lateral carinæ (viewed from the side) nearly straight, interval between the eyes little more than half as wide as in *C. cupripennis*, elytra not striate, their interstices quite flat and very distinctly punctured, the punctures in the elytral series not very closely placed (distinctly less closely than in *C. cupripennis*). The outline curve of the elytra is as in *C. vividus*; the seriate punctures of the elytra are much finer than in that species.

Victoria; sent by Mr. French.

C. CONFLUENS, sp. nov.

Ovalis; nitidus; niger; supra versicolor viridi-aureo-pureo-et cyaneo-micans; capite crebre fortiter punctulato; oculis quam antennarum articuli basalis longitudine magis inter se remotis; sulcis ocularibus nullis; antennis apicem

versus sat incrassatis, quam corporis dimidium multo brevioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti parum longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes parum brevioribus; prothorace quam longiori duplo (postice quam antice fere duplo) latiori, fortiter (in medio sparsius, latera versus fere confluentem) punctulato, apice sat fortiter sinuatim emarginato, postice leviter antice fortiter arcuatim angustato, basi media sat late sublobata, angulis anticis obtuse subproductis posticis fere rectis; elytris sat subtiliter seriatim punctulatis, interstitiis planis quam series nullo modo minus fortiter punctulatis; prosterno medio carinato ad latera ruguloso; corpore subtus sat fortiter vix crebre punctulato, abdomine rugato; femoribus anticis antice subtilius sat crebre punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali quam ceteri conjuncti parum breviori.

[Long. $5-6\frac{1}{2}$, lat. $3-3\frac{1}{2}$ lines.

The coarse puncturation of the prothorax rugulose crowded on the sides distinguishes this species from all its congeners known to me except *fastuosus*, Germ. The seriate punctures of the elytra are somewhat finer than in *cupripennis*, and are quite indistinguishable from the punctures of the interstices except by their seriate arrangement. The interval between the eyes is about a quarter narrower than in *cupripennis*. The outline curve of the elytra, viewed from the side, is strong, with its summit slightly in front of the middle.

W. Australia.

C. MICANS, sp. nov.

♀ (?). Ovalis; sat nitidus; niger, prothorace elytrisque versicoloribus purpureo-cyaneo-viridi-et aureo-micantibus; capite crebre sat fortiter punctulato, antice in medio anguste lævi; oculis quam antennarum articuli basalis longitudine magis inter se remotis; sulcis ocularibus nullis; antennis apicem versus manifeste incrassatis, quam corporis dimidium sat brevioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti sat

longiori quam 4^{us} 5^{us}que conjuncti parum breviori, articulis 8-10 quam præcedentes sat brevioribus; prothorace quam longiori (et postice quam antice) fere tribus partibus latiori, crebre sat æqualiter minus subtiliter punctulato, antice sat fortiter sinuatim emarginato, lateribus (superne visis) fere recte a basi ad apicem convergentibus, basi retrorsum sat fortiter sinuatim producta, angulis anticis productis sat acutis posticis acutis (apice summo truncato); elytris sat subtiliter seriatim punctulatis, interstitiis planis sat crebre (quam series vix minus fortiter) punctulatis; prosterno medio sulcato; metasterni parte media sparsim subtiliter, lateribus episternisque magis fortiter, punctulatis; abdomine crebre minus subtiliter punctulato obscure rugato; femoribus anticis antice sparsius minus subtiliter punctulatis; tarsis subtus nigro setosis, posticorum articulo basali quam apicales 2 conjuncti paullo longiori. [Long. 6, lat. 3 lines.

Resembles *C. palmerstoni* and *C. eyrensis* in the straightness of the sides of its prothorax, but differs from both in the deep emargination and sharp angles of the front of the prothorax. The seriate punctures are so little larger than those of the interstices that the series are quite indistinct. If this species be compared with *C. cupripennis*, Hope, the following differences among others are noticeable: the space between the eyes is very evidently narrower, the punctures of the head, of the prothorax, and of the elytral interstices are very distinctly stronger, the seriate punctures of the elytra are a little less strong, the prothorax is quite differently shaped, and the outline curve of the elytra (viewed from the side) is at its summit not in front of the middle. The lateral carina of the prothorax is really straight in this species, but is not in the preceding two or in *eyrensis*.

W. Australia; Yilgarn; sent by C. French, Esq.

C. EYRENSIS, sp. nov.

Elongato-ovalis; sat nitidus; niger, prothorace elytrisque ut *C. micantis* tinctis; capite crebre sat fortiter sat æqualiter punctulato; oculis quam antennarum articuli basalis longi

tudine multo magis inter se remotis ; sulcis ocularibus nullis ; antennis apicem versus vix incrassatis, quam corporis dimidium vix (σ) vel multo (σ) brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti multo longiori quam 4^{us} 5^{us}que conjuncti manifeste breviori, articulis 8-10 quam præcedentes manifeste brevioribus ; prothorace quam longiori (et postice quam antice) fere duplo latiori, sparsius sat subtiliter punctulato, antice sinuatim subtruncato, lateribus (superne visis) fere recte a basi ad apicem convergentibus, basi retrorsum sat fortiter sinuatim producta, angulis anticis obtusis posticis acutis (apice summo truncato) ; elytris sat subtiliter seriatim punctulatis, interstitiis minus planis (præsertim maris) sat crebre (quam series sat subtilius) punctulatis ; prosterno medio carinato ; metasterno ut *C. micantis* ; abdomine sparsim obscure punctulato et rugato ; femoribus anticis antice ut *C. micantis* ; tarsis subtus nigro-setosis, posticorum articulo basali quam ceteri conjuncti parum breviori. [Long. 6-6½, lat. 2½-3 lines.

Resembles the preceding in the peculiar shape of its prothorax, but is very differently punctured. Compared with *C. cupripennis*, the space between the eyes is scarcely narrower, and has no defined lævigata portion ; the shape of the prothorax is entirely different, the puncturation of the elytra is very similar, the interstices of the elytra are more or less convex in some examples (? males), and the outline curve of the elytra (viewed from the side) is at its summit much further from the base.

S. Australia ; basin of Lake Eyre.

C. PALMERSTONI, sp. nov.

σ (?). Sat anguste ovalis ; sat nitidus ; niger, elytris cæruleis certo adspectu purpureo- vel viridi-micantibus ; capite vix perspicue (clypeo paullo magis distincte) punctulato ; oculis quam antennarum articuli basalis longitudine vix minus inter se remotis ; sulcis ocularibus nullis ; antennis corporis dimidio longitudine sat æqualibus, articulo 3^o quam 1^{us} 2^{us} que conjuncti sat longiori quam 4^u 5^{us}que conjuncti parum

breviori, articulis 8-10 nullo modo incrassatis quam præcedentes haud brevioribus; prothorace quam longiori (et postice quam antice) fere tribus partibus latiori, subobsolete sat crebre vix subtiliter punctulato (exempli typici utrinque ante basin sulco obliquo impresso), antice leviter sinuatim emarginato, lateribus (superne viso) fere rectis a basi antorsum convergentibus, angulis anticis obtusis posticis (superne visis) acutis; elytris minus subtiliter seriatim punctulatis, interstitiis planis obsoletissime vix perspicue punctulatis; prosterno medio concavo; corpore subtus fere lævi, abdomine leviter rugato; tarsis subtus nigro-setosis, posteriorum articulo basali quam ceteri conjuncti parum breviori. [Long. $5\frac{1}{2}$, lat. $2\frac{3}{4}$ lines.

The prothorax small and with its sides (viewed from above) almost straight in their whole length, distinguishes this species from all but a very small number of its congeners. The remarkable obliquely placed furrow on either side of the prothorax a little in front of the base is very likely to be merely accidental in the typical specimen. The eyes (in the typical specimen) are too much drawn back into the prothorax for the space dividing them to be measured, but I can see that it is just about half as wide as in *C. cupripennis*, Hope. The seriate punctures of the elytra are not much different from those in the middle part of the discal series in *cupripennis*; but their size does not vary noticeably in the series towards the suture or lateral margins, and this, together with the interstices being scarcely punctured, makes the seriate punctures appear to a casual glance very much stronger than in that species. The outline curve of the elytra (viewed from the side) is very strong, its summit being almost *behind* the middle of its length.

N. Territory of S. Australia; near Palmerston.

C. PERLONGUS, sp. nov.

♂ (?). Elongato-oblongus; nitidus; niger, elytris versicoloribus æneo-viridi et violaceo-micantibus; capite crebre sat fortiter punctulato, in medio anguste lævi; oculis quam antennarum

articuli basalis longitudine paullo magis inter se remotis; sulcis ocularibus nullis; antennis apicem versus vix incrassatis, quam corporis dimidium parum brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti sat breviori, articulis 8-10 elongatis quam præcedentes vix brevioribus; prothorace quam longiori (et postice quam antice) dimidio latiori, crebre sat fortiter punctulato, antice truncato, a basi antrorsum (vix arcuatim) angustato, basi retrorsum arcuatim vix sinuatim producta, angulis anticis obtusis posticis subacutis; elytris subtiliter sat seriatim punctulatis, interstitiis planis subtiliter subcrebre punctulatis; prosterno medio sulcato; metasterno sparsim, episternis magis crebre, punctulatis; abdomine sparsim distincte punctulato, obscure rugato; femoribus anticis antice sparsim sat subtiliter punctulatis; tarsi subtus nigrosetosis, posteriorum articulo basali quam apicales 2 conjuncti paullo longiori. [Long. $7\frac{1}{2}$, lat. $3\frac{1}{5}$ lines.

This is a very elongate species resembling *C. cylindricus* in outline, but being less convex it does not appear so cylindrical. It is an extremely isolated type, the evenly distributed strong puncturation of its prothorax and the well-defined puncturation (scarcely at all obscured by wrinkles) of the underside being characters almost as unusual as the peculiarly elongate form. The interval between the eyes is about a third narrower than in *C. cupripennis*, and the elytral puncturation (both of the series and the interstices) is almost as in that species.

S. Australia; McDonnell Ranges; sent by C. French, Esq.

C. OBSCURUS, sp. nov.

Ovalis, subelongatus; minus nitidus; niger, elytris obscure cyaneis, vix purpureo-tinctis; capite opaco æqualiter sat crebre subtilius punctulato; oculis quam antennarum articuli basalis longitudine vix minus inter se remotis; sulcis ocularibus nullis; antennis (♀?) quam corporis dimidium sat brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis

8-10 quam præcedentes paullo brevioribus nullo modo incrassatis; prothorace opaco, quam longiori fere tribus partibus (postice quam antice fere duplo) latiori, haud punctulato, antice sat fortiter bisinuato, a basi (superne viso) antrorsum arcuatim angustato, basi media sat late sublobata, angulis anticis obtusis; elytris minus fortiter (quam *C. cupripennis* sat magis fortiter, suturam versus sat subtiliter) seriatim punctulatis, interstitiis planis sparsim subtiliter punctulatis; prosterno medio sat profunde sulcato; metasterno in medio subtiliter ad latera sat crasse punctulato, episternis obsolete punctulatis; abdomine sat crebre punctulato obscure rugato; femoribus anticis antice sparsim subtiliter punctulatis: tarsi subtus fulvo-setosis, posticorum articulo basali quam apicalis vix longiori.

[Long. $6\frac{3}{4}$, lat. $3\frac{3}{8}$ lines.

A very distinct species distinguished by its opaque dark blue-black appearance in combination with the perfectly flat evidently punctulate interstices of its elytra and the short basal joint of its hind tarsi. It bears a certain resemblance to *C. celestis*, Pasc., but is larger and more obscure, without ocular sulci, &c. *C. celestis*, moreover, has the basal joint of its hind tarsi much longer. The outline curve of the elytra, viewed from the side, is moderately strong, with its summit about the middle. The space between the eyes is scarcely more than half as wide as in *cupripennis*, but is evidently wider than in *vigilans*, *major*, &c. I have an example from Port Darwin and another from N. Queensland, which probably represent distinct species, as they present appreciable differences in the seriate puncturation of the elytra; but as they are unique specimens it is safer at present to treat them as local forms of this insect. The colour of the elytra in both is a uniform dark green.

N. W. Australia; Kimberley district.

C. NEGLECTUS, sp. nov.

Oblongo-ovalis; sat nitidus; niger, elytris cyaneis, certo aspectu violaceo-micantibus; capite sat crebre (postice

minus crebre) sat fortiter punctulato; oculis quam antenarum articuli basalis longitudine multo minus inter se remotis; sulcis ocularibus nullis; antennis quam corporis dimidium paullo brevioribus, apicem versus haud incrassatis, articulo 3° quam 1^{us} 2^{us}que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti parum breviori, articulis 8-10 quam præcedentes haud brevioribus; prothorace quam longiori (et postice quam antice) vix tribus partibus latiori, haud punctulato, antice sinuatim vix emarginato, a basi antrorsum arcuatim angustato, basi media sat late subtruncata, angulis anticis obtusis posticis (superne visis) subacutis; elytris seriatim minus subtiliter punctulatis, interstitiis planis sat crebre minus subtiliter punctulatis; prosterno medio planato; metasterno in medio subfortiter sat crebre punctulato, latera versus oblique rugato, in episternis vix manifeste punctulato; abdomine distincte nec fortiter punctulato et leviter rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus fulvo-setosis, posticorum articulo basali quam ceteri conjuncti paullo breviori. [Long. 8, lat. 4½ lines.

Not very near to any other described species; among the species devoid of ocular sulci and having the tarsal vestiture fulvous, it may be distinguished by the following characters in combination: eyes exceptionally approximate, prothorax impunctulate. The outline curve of the elytra (viewed from the side) is moderately strong, with its summit somewhat in front of the middle. The seriate punctures of the elytra are a trifle stronger than in *cupripennis*, Hope (*considerably* stronger near the lateral margins), and the interstices are evidently less finely punctulate. Compared with *C. obscurus* the eyes are more approximate, the 3rd joint of the antennæ is considerably longer, the elytral sculpture is evidently stronger, the prothorax is impunctulate, &c., &c.

An example, belonging to Mr. French, from the same locality as the type, specifically identical I think, is larger (long. 9½ lines) with the eyes a trifle more approximate, the colour more greenish and the elytral sculpture a little coarser. It is quite possibly a distinct species, but I do not find any character that seems

satisfactory for giving it a name, at any rate without being sure that the differences are constant.

Queensland ; Darling Downs ; sent by Mr. French.

C. MINOR, sp.nov.

Ovalis ; sat nitidus ; niger, elytris cyaneis certo adpectu viridi- vel purpureo-micantibus ; capite subtiliter inæqualiter punctulato ; oculis quam antennarum articuli basalis longitudine paullo minus inter se remotis ; sulcis ocularibus nullis ; antennis quam corporis dimidium vix longioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti paullo longiori quam 4^{us} 5^{us}que conjuncti parum breviori, articulis 8-10 quam præcedentes vix brevioribus haud incrassatis ; prothorace quam longiori duabus (postice quam antice tribus) partibus latiori, sparsim obsolete (vix manifeste) punctulato, antice subtruncato vix emarginato, a basi (superne viso) antrosum arcuatim angustato, basi media sat late sublobata, angulis anticis obtusis ; elytris subtiliter vix crebre seriatim punctulatis, interstitiis sub lente vix manifeste punctulatis ; prosterno medio plus minusve manifeste sulcato ; metasterno medio subtiliter, lateribus episternisque vix perspicue, punctulatis ; abdomine sparsim obsolete punctulato, obsolete rugato ; femoribus anticis antice subtiliter minus crebre punctulatis ; tarsis subtus fulvo-setosis, posticorum articulo basali quam apicales 2 conjuncti sublongiori.

[Long. 5-6, lat. 3-3½ lines.

The interval between the eyes is about half as wide as in *C. cupripennis*, Hope. The seriate punctures of the elytra are very similar to those of *cupripennis*, but the interstices being lævigata, or very nearly so, the seriate punctures are very much more conspicuous. The absolute flatness of the interstices on the elytra distinguishes this species from those which are its nearest allies structurally.

W. Australia.

C. MAJOR, sp.nov.

♂ (?). Elongato-ovalis; sat robustus; minus nitidus; niger, capite prothoraceque plus minusve cyaneo tinctis, elytris læte cyaneis certo adspectu purpureo- et viridi-micantibus; capite subtilissime sat æqualiter punctulato; oculis quam antennarum articuli 2ⁱ longitudine haud multo magis inter se remotis; sulcis ocularibus nullis; antennis apicem versus haud incrassatis quam corporis dimidium vix brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-11 quam præcedentes sat brevioribus; prothorace sat opaco, quam longiori fere duabus partibus (postice quam antice fere duplo) latiori, subtiliter minus perspicue punctulato, antice bisinuato, a basi (superne viso) antrorsum sat rotundatim angustato, basi bisinuata, angulis anticis obtusis; elytris æqualiter sat subtiliter (quam *C. cupripennis* paullo minus subtiliter) seriatim punctulatis, interstitiis leviter convexis haud vel vix manifeste punctulatis; prosterno medio antice carinato; metasterno medio perspicue, ad latera et in episternis vix manifeste, punctulato; abdomine indistincte punctulato, perspicue rugato; femoribus anticis antice minus sparsim minus subtiliter punctulatis; tarsis subtus fulvo-setosis, posticorum articulo basali quam ceteri conjuncti manifeste breviori quam apicalis sat longiori. [Long. $9\frac{1}{2}$, lat. 5 lines.

The only very large *Chalcopterus* known to me having in combination, eyes not bordered by a sulcus, prothorax evidently narrower at the middle than at the base, and tarsi with fulvous cilia. The evident convexity of the interstices makes the elytra appear substriate, somewhat as *C. longipennis*, Hope.

N. Queensland; sent by C. French, Esq.

C. MERCURIUS, sp.nov.

Elongato-ovalis; sat nitidus; niger, elytris læte cyaneis, certo adspectu purpureo- aureo- et viridi-micantibus; capite leviter (inter oculos obsolete) punctulato; oculis quam antennarum articuli basalis longitudine minus inter se

remotis; sulcis ocularibus nullis; antennis (δ ?) quam corporis dimidium longioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti multo longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes sat brevioribus haud incrassatis; prothorace opaco quam longiori fere tribus partibus (postice quam antice duplo) latiori, vix manifeste punctulato, antice subtruncato (vix emarginato), a basi (superne viso) antrorsum arcuatim angustato, basi media sat late sublobata, angulis anticis obtusis; elytris sat æqualiter striatis, striis sat fortiter sat æqualiter punctulatis, interstitiis convexis vix manifeste punctulatis; prosterno medio sulcato; metasterno medio subtiliter, episternis vix perspicue, punctulatis; abdomine vix manifeste punctulato longitudinaliter sat fortiter rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus fulvo-setosis, posticorum articulo basali quam apicales 2 conjuncti parum breviori.

[Long. 7, lat. 3½ lines.

Among the species devoid of ocular sulci with the prothorax much narrowed in front, and at its widest at the base (but not trapezoidal) and with the tarsi fulvous beneath, this insect is recognised by the following characters in combination: size moderate, front of prothorax scarcely emarginate, elytra striate, head almost devoid of puncturation. The interval between the eyes is about half as wide as in *cupripennis*. The outline curve of the elytra (viewed from the side) is not at all strong, and its summit is about at the middle.

N. Queensland; sent by C. French, Esq.

C. MIMUS, sp. nov.

Oblongo-ovalis; sat nitidus; niger, prothorace obscure cyanescenti, elytris læte cyaneis (certo adspectu) purpurascens; oculis quam antennarum articuli basalis longitudine vix magis remotis; prothorace crebrius punctulato, lateribus (superne visis) a basi antrorsum arcuatim sat æqualiter convergentibus, angulis posticis (superne visis) sat obtusis; elytris minus cylindricis, serierum puncturis paullo minoribus

et minus æqualibus (suturam lateraque versus magis subtilioribus), interstitiis paullo minus planis sat crebre punctulatis; cetera ut *C. cylindrici*. [Long. 6, lat. 3 lines.

Near *C. cylindricus* in many respects, but very differently coloured, with the eyes less remote, the prothorax and elytral interstices much more closely [though not much less faintly (prothorax) or finely (interstices)] punctured, the punctures in the discal series scarcely so large (at least seven in the length of a line), and distinctly smaller in the series near the suture and lateral margins. The shape also is distinctly less cylindric; this is especially notable if the insects be looked at from the side, when the upper outline of *cylindricus* appears as a nearly straight line from the base of the elytra to considerably beyond the middle, the corresponding outline in *minus* being a curve; in *minus*, moreover, the prothorax viewed from above is at its widest more exactly at the base, while in *cylindricus* it seems almost to dilate (or at any rate not to narrow) immediately in front of the base. *C. minus* also resembles *C. tyrrenus*, Pasc., but that species is more cylindric (almost as much so as *cylindricus*), with the prothorax wider in front, the elytra striate, the eyes a little more remote, &c.

W. Australia; Yilgarn; sent by Mr. French.

C. SIMILIS, sp. nov.

C. longipenni, Hope, valde affinis, sed corpore subtus haud vel vix iridescenti, tarsis brevioribus fulvo-ciliatis, posticorum articulo basali quam apicalis vix longiori.

[Long. 8, lat. $3\frac{3}{4}$ lines.

This species is perplexingly like *C. longipennis*, Hope. I have before me two examples (both from the neighbourhood of King George's Sound) which are probably male and female, since they differ from each other by characters similar to those which distinguish the sexes of *longipennis*, and which also differ from each other in the underside of one being quite black while the corresponding surface of the other is faintly tinged with coppery colour. They both differ from *longipennis* in their tarsi being shorter and

clothed with (not black but) fulvous setæ, and also in the basal joint of the hind tarsi being of nearly the same length as the apical joint, while the corresponding joint in *longipennis* is a trifle longer than the 3rd and 4th joints together. The bisinuation of the front of the prothorax in this species is very feeble and renders its place in the tabulation a little doubtful.

W. Australia.

C. CYLINDRICUS, sp. nov.

Sat cylindricus ; nitidus ; niger, elytris splendide versicoloribus (coloribus aureis purpureis viridibusque, his plus minusve longitudinaliter dispositis, ornatis) ; capite prothoraceque minus nitidis ; illo sat æqualiter sat crebre minus subtiliter punctulato ; oculis quam antennarum articuli basalis longitudine magis remotis ; sulcis ocularibus nullis ; antennis corporis dimidio sat brevioribus, sat robustis, articulo 3° quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti sat breviori, articulis 8-10 quam præcedentes vix brevioribus ; prothorace quam longiori postice quam antice paullo magis quam dimidia parte latiori, leviter sat crebre (latera versus magis obsolete) punctulato, antice subtruncato, lateribus (superne visis) mox ante basin antrorsum fere divergentibus hinc ad apicem arcuatim convergentibus, basi bisinuata, angulis posticis (superne visis) subacutis ; elytris seriatim fortiter sat æqualiter (postice magis subtiliter) punctulatis, interstitiis sat planis sparsim subtilissime punctulatis ; prosterno acute carinato ; corpore subtus subtilissime (abdominis lateribus obscure subrugulosis) punctulatis ; pedibus subtiliter minus sparsim punctulatis ; tarsis subtus fulvo-setosis. [Long. 7, lat. 3 lines.

Totally different from all the preceding in shape, but resembling in that respect *C. logiusculus*, from which, however, it differs *inter alia* by its non-striate elytra. The puncturation of its prothorax closely resembles that of *C. cupripennis*, Hope ; the seriate punctures of the elytra resemble those in the intermediate rows on the elytra of *C. punctipennis*, Macl., in which species, however, the punctures become feebler towards the suture and

coarser towards the lateral margins, whereas in the present insect they are uniform or nearly so. There are about six punctures in the length of a line in the discal series, and the intervals between puncture and puncture are about equal to (slightly more or less than) the diameter of the individual punctures. The eyes are fully as wide apart as in *C. cupripennis*. This is an exceptionally beautiful species.

N. Queensland ; sent to me by Mr. French ; also N. S. Wales, near Wilcannia.

C. BOVILLI, sp.nov.

♂ (?). Elongatus ; subcylindricus ; sat nitidus ; niger ; capite sat crebre sat æqualiter minus subtiliter punctulato ; oculis quam antennarum articuli basalis longitudine vix magis inter se remotis ; sulcis ocularibus nullis ; antennis apicem versus leviter incrassatis, quam corporis dimidium longioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti vix breviori, articulis 8-10 quam præcedentes haud brevioribus ; prothorace quam longiori vix dimidio (postice quam antice fere duabus partibus) latiori, distincte crebre leviter punctulato, antice subsinuatim truncato, a basi antrorsum sat arcuatim angustato, basi retrorsum arcuatim vix sinuatim producta, angulis omnibus distinctis obtusis ; elytris sat subtiliter seriatim punctulatis, interstitiis fere planis sparsim subtilissime punctulatis ; prosterno medio leviter carinato ; corpore subtus fere lævi, abdomine obscure rugato ; femoribus anticis antice sparsim minus subtiliter punctulatis ; tarsi subtus fulvo-setosis, posteriorum articulo basali quam apicales 2 sublongiori.

[Long. $5\frac{1}{2}$, lat. $2\frac{1}{2}$ lines.

Like the preceding, the width of the front of the prothorax as compared with the base in this species seems to make it somewhat intermediate between the two groups that I have distinguished in the tabulation by the prothorax being more or less narrowed forward. If placed among those with the prothorax more narrowed it would fall beside *C. minor*, from which *inter*

alia its much narrower and more slender form will easily distinguish it.

Compared with *C. cupripennis* the interval between the eyes is nearly a half narrower, prothorax of totally different form, seriate punctures of elytra a little less closely placed, interstices all but impunctulate, general form quite different, &c., &c.

N. Territory of S. Australia.

C. COLOSSUS, sp.nov.

♀ (?). Oblongus; parallelus; sat nitidus; niger, elytris viridibus purpureo- (præsertim in sutura) et aureo- micantibus; capite crebre subtilius subrugulose punctulato; oculis quam antennarum articuli basalis longitudine vix magis inter se remotis; sulcis ocularibus nullis; antennis quam corporis dimidium sat brevioribus, articulo 3° quam 1^{us} 2^{us}que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti sat breviori articulis 8-10 quam præcedentes multo brevioribus vix incrassatis; prothorace quam longiori quatuor partibus (postice quam antice duplo) latiori, subtiliter sat crebre æqualiter punctulato, antice modice emarginato, lateribus postice fere parallelis, basi trisinuata, angulis anticis obtusis posticis (superne visis) sat rectis; elytris subtiliter seriatim punctulatis, interstitiis subconvexis sat crebre distincte punctulatis; prosterno medio carinato; metasterno in medio subfortiter punctulato, latera versus fortiter oblique rugato, in episternis subtilius punctulato; abdomine sat crebre subfortiter punctulato et fortiter rugato; femoribus anticis antice subtilius sat distincte punctulatis; tarsis subtus fulvotosis, posticorum articulo basali quam apicales 2 conjuncti paullo breviori. [Long. 10½, lat. 5 lines.

This remarkably fine large species is closely allied to *C. longulus*, from which it differs (apart from colour) in its considerably more closely punctured head, in the much greater transversity and different puncturation of its prothorax, and in the distinct though gentle convexity of its elytral interstices, which is even more pronounced near the apex than in front.

S. Australia; Basin of Lake Eyre; also N.S. Wales, near Wilcannia.

C. IMPERIALIS, sp.nov.

C. colosso affinis; differt capite inter oculos paullo minus crebre punctulato et (exempli typici) inter oculos utrinque longitudinaliter carinato, antennis apicem versus magis incrassatis (articulis 8-10 quam præcedentes haud multo brevioribus), elytrorum puncturis seriatis multo majoribus et interstitiis nullo modo convexis fortiter punctulatis, metasterno minus fortiter magis sparsim sculpturato, et (ab exemplis visis) coloribus multo magis splendidis,—sc. viridi aureo purpureo cyaneoque-longitudinaliter vittatim positus (fere ut *C. superbi*, Blackb.). [Long. 10, lat. $5\frac{1}{2}$ lines.]

This species is near *C. colossus*, Blackb. The style of colouring is so entirely different that it may probably be relied on as a character. The difference in the antennæ may be unreliable, as I am not sure of the sex of either species. The carina on either side of the interval between the eyes is probably constant. The antero-internal corner of the eyes is much rounded off, so that the interval between the eyes looks much less parallel than in *C. colossus* (the head is almost exactly like that of *C. carinaticeps* except in not having distinct ocular sulci). The punctures in the elytral series are considerably stronger than in *C. variabilis*, Blessig (they are scarcely less strong than in *C. punctipennis*, Macl.), whereas in *C. colossus* the corresponding punctures are very little less fine and close than in *C. cupripennis*, Hope. The interstices on the elytra are more strongly punctured than in almost any other *Chalcopterus*, very little less so than in *C. rugosipennis*, Macl., while in *C. colossus* the punctures of the interstices are exceptionally fine.

Queensland; Darling Downs; sent by Mr. French.

C. LONGULUS, sp.nov.

Elongatus; sat parallelus; sat nitidus; niger, elytris versicoloribus purpureis latera versus viridi- et cyaneo-micantibus; capite subtiliter sat crebre punctulato, vertice medio lævigato;

oculis quam antennarum articuli basalis longitudine fere magis inter se remotis; sulcis ocularibus nullis; antennis (♀ ?) quam corporis diuidium sat brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti sat longiori quam 4^{us} 5^{us}que conjuncti multo breviori, articulis 8-10 quam præcedentes multo brevioribus vix incrassatis; prothorace subopaco quam longiori (et postice quam antice) duabus partibus latiori, subtiliter inæqualiter punctulato, antice sat fortiter emarginato, lateribus postice fere parallelo, basi trisinuata, angulis anticis obtusis posticis (superne visis) sat rectis; elytris subtiliter seriatim punctulatis, interstitiis sat crebre distincte punctulatis; prosteruo medio carinato; metasterno in medio subtilius latera versus sat rugulose, in episternis distincte, punctulato; abdomine crebrius sat fortiter punctulato et rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus fulvo-setosis, posticorum articulo basali quam apicales 2 conjuncti vix breviori. [Long. 8, lat 4 lines.

A large robust species bearing much general resemblance to *C. similis*, Blackb., but differing from it by its larger size and by the sides of the prothorax (viewed from above) being parallel or nearly so in their hinder half and then roundly narrowed to the front. If the prothorax be viewed from the side, the lateral carina appears in *C. similis* as a curve evenly arched downward from base to apex, while the same in *C. longulus* is seen to be strongly sinuate in its front half. The interval between the eyes is something more than half as wide as in *C. cupripennis*. The seriate punctures on the elytra and the punctures of the interstices scarcely differ from the same in *C. cupripennis*. The interstices being slightly convex near the front, the elytra have some appearance of striation, as in *C. longipennis*, Hope, and *similis*, Blackb.

W. Australia.

C. LONGIPENNIS, Hope.

Oblongus; sat nitidus; niger, et supra et subtus iridescens, viridi-cyaneo-aureo- et purpureo-versicolor; capite æqualiter crebre distincte punctulato; oculis quam antennarum articuli basalis longitudine fere minus inter se remotis;

sulcis ocularibus nullis; antennis quam corporis dimidium paullo (σ) vel multo (σ) brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti manifeste longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes vix (σ) vel manifeste (σ) brevioribus; prothorace quam longiori (et postice quam antice) tribus partibus latiori, sat crebre distincte (maris quam feminae minus distincte) punctulato, antice leviter sinuatim emarginato, a basi antrorsum (superne viso) arcuatim (antice quam postice magis fortiter) angustato, basi media sublobata, angulis anticis obtusis; elytris subtiliter (fere ut *C. cupripennis*, maris quam feminae paullo magis subtiliter) seriatim punctulatis, interstitiis leviter subconvexis sat subtiliter (maris quam feminae paullo magis subtiliter) punctulatis; prosterno medio antice carinato; metasterno sat distincte punctulato et oblique rugato, episternis minus nitidis obsolete punctulatis; abdomine distincte punctulato et longitudinaliter rugato; femoribus anticis subtilius sat sparsim punctulatis; tarsis subtus nigro-setosis, posteriorum articulo basali ceteris conjunctis sat breviori.

[Long. $7\frac{1}{2}$ -8, lat. $3\frac{1}{2}$ - $3\frac{3}{4}$ lines.]

Hope's description of *C. longipennis* is too brief for certain identification on its merits, but as the author expressly states that Adelaide is the habitat of the species, mentions $7\frac{1}{2}$ lines as the length, and specifies the shape as oblong, as there is nothing in the description distinctly inconsistent with my identification, and as, moreover, this insect is not rare near Adelaide, and is the only oblong species of large size that I know of occurring near Adelaide, I have little hesitation in applying the name, though I take the precaution of carefully describing the species to which I apply it. The principal discrepancy is in respect of colour, as Hope says that the prothorax is "black," and the underside "black and nitid." I have not seen an example of this insect in which both prothorax and underside are not iridescent, but in dark specimens (especially if they have become a little greasy) the iridescence of the prothorax is not very brilliant, and it seems

possible that the addition of "and nitid" to the "black" in describing the underside may be a reference to the iridescence as in describing other species (e.g. *cyanipennis*), in which the underside only differs in colour in the absence of iridescence Mr. Hope calls the underside simply "black." "Elytra punctulate-striate," moreover, presents a slight difficulty; but here again the insect I have described presents some excuse for the phrase, for although when carefully examined it is seen that the elytra are not genuinely striate, yet the interstices being distinctly not quite flat, and the punctures in the series close, there is certainly some superficial appearance of striation in contrast with the absolute want of it in *cupripennis* and numerous others of the genus. Compared with *C. cupripennis* the species differs *inter alia* as follows: the eyes are much less widely separated, the head is evenly punctured (without a lævigata space between the eyes), the prothorax is more strongly punctured and much less transverse, the interstices of the elytra are less flat and less strongly punctured so that the seriate punctures appear more distinct, the general form is larger and more elongate, and the underside is iridescent. The last-named character furnishes a distinction from nearly all the other *Chalcopteri* known to me. The elytral outline (viewed from the side) is a very gentle curve, with its summit about the middle of the length. From *C. fervens*, Germ., this species differs *inter alia* by its much more elongate and parallel form, and its prothorax (not evenly narrowed in a regular curve from the base but) narrowing only slightly from the base to the middle, and then much more strongly forward.

S. Australia; widely distributed.

C. IRIDIVENTRIS, sp.nov.

Ovalis; subelongatus; sat nitidus; niger, et supra et subtus iridescens (exemplo typico subtus magis læte quam supra), viridi-cyaneo-aureo-et purpureo-versicolor; capite sat æqualiter sat crebre punctulato; oculis quam antennarum articuli basalis longitudine fere minus inter se remotis; sulcis ocularibus nullis: antennis quam corporis dimidium

brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti sat breviori, articulis 8-10 quam præcedentes haud brevioribus; prothorace quam longiori (et postice quam antice) tribus partibus latiori, subtiliter minus sparsim minus perspicue punctulato, antice leviter sinuatim emarginato, a basi antrorsum (superne viso) æqualiter arcuatim angustato, basi anguste sublobata, angulis anticis paullo prominulis; elytris subtiliter (quam *C. cupripennis* paullo magis subtiliter) seriatim punctulatis, puncturis in seriebus crebre positis, interstitiis planis vix manifeste punctulatis; prosterno medio leviter concavo; metasterno medio subtilissime ad latera vix perspicue punctulato, episternis minus subtiliter punctulatis; abdomine distincte punctulato et longitudinaliter rugato; femoribus anticis sparsim subtiliter punctulatis; tarsis subtus nigro-setosis, posteriorum articulo basali ceteris conjunctis (unguiculis exceptis) sat æquali. [Long. 5½, lat. 2¼ lines.

Differs from nearly all its congeners in having the whole under-surface (especially the ventral segments) brilliantly iridescent. In build closely resembling *C. letus* but differing *inter alia* in its prothorax a little less transverse (not more than once and three-quarters as wide as long), the seriate punctures of its elytra considerably finer and closer (four or five in the middle part of the intermediate rows on a length equal to the width of an interstice), the interstices even less visibly punctulate, and the upper surface less nitid. Compared with *fervens*, Germ., (which also has the undersurface iridescent) this insect is a much less robust and more elongate species, with longer legs, hind tarsi much longer, puncturation finer throughout, &c.

S. Australia; near Port Lincoln.

C. SETOSUS, sp. nov.

♂ (?). Elongato-ovalis; subnitidus; niger, supra viridis vix aureo-micans; capite crebre sat subtiliter punctulato; oculis quam antennarum articuli basalis longitudine haud multo minus inter se remotis; antennis quam corporis dimidium

paullo longioribus, articulis apicalibus quam præcedentes haud brevioribus; prothorace sat perspicue punctulato antice sat fortiter bisinuato, hoc (exempli typici) utrinque ad basin oblique impresso; elytris sat fortiter (quam *C. cupripennis* multo magis grosse) seriatim punctulatis, interstitiis planis sparsim subtiliter punctulatis et puncturis majoribus sparsissimis (his setas subtiles fulvas erectas ferentibus) instructis, epipleuris setis erectis sat crebre vestitis; metasterni episternis perspicue punctulatis; abdomine crebre minus subtiliter punctulato, minus perspicue rugato; cetera ut *C. majoris*. [Long. 8, lat. $4\frac{1}{2}$ lines.

The elongate fine setæ sparingly sprinkled over the elytra and quite thickly clothing the epipleuræ, render this a most distinct species. The interval between the eyes is about half as wide as in *C. cupripennis*. The outline curve of the elytra (viewed from the side) is moderately arched and its summit is slightly in front of the middle.

Victoria; sent by Mr. Best, of Melbourne.

C. SEMISERIATUS, sp. nov.

♀ (?). Sat late oblongus; sat nitidus; niger, elytris cupreo-purpureis, certo situ viridi-micantibus; capite antice crebre subtilius postice magis fortiter minus crebre punctulato; oculis quam antennarum articuli basalis longitudine vix magis inter se remotis; sulcis ocularibus sat bene determinatis sat elongatis; antennis quam corporis dimidium sat brevioribus, apicem versus vix incrassatis, articulo 3^o quam 1^{us} 2^{us}que conjuncti paullo longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes paullo brevioribus; prothorace quam longiori (et postice quam antice) tribus partibus latiori, subtiliter minus crebre punctulato, antice leviter bisinuato-emarginato, a basi antrorsum (leviter arcuatim) angustato, basi media sat anguste sublobata, angulis anticis obtusis posticis (superne visis) leviter subacutis; elytris interrupte sat subtiliter seriatim punctulatis, interstitiis planis distincte sat crebre

punctulatis; prosterno medio sulcato; metasterno in medio sparsim minus subtiliter punctulato, latera versus oblique rugato, in episternis sparsim subtiliter punctulato; abdomine distincte sat sparsim punctulato et rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus obscure piceo-setosis, posticorum articulo basali quam ceteri conjuncti vix breviori. [Long. 8, lat. $4\frac{1}{2}$ lines.

Rather a robust-looking species, distinguished among its allies by the irregularity of the seriate puncturation of its elytra. The middle part of the series near the suture is obliterated, and parts of other series are very obscure. If this species be placed beside *C. cupripennis* it will be seen that the interval between its eyes is not much more than half as wide, that its prothorax is less transverse, less nitid, and more finely but less feebly punctulate, that the seriate punctures of its elytra are much less evenly placed and a trifle less fine, that the interstices are more closely punctulate, and that the general form is more parallel. The outline curve of the elytra (viewed from the side) is moderately strong with its summit at about the middle of its length.

Victoria; sent by C. French, Esq.

C. PLUTUS, sp.nov.

Ovalis; minus elongatus; sat nitidus; niger, supra purpureus, certo adspectu cyaneo-viridi-micans; capite antice crebre (postice minus crebre) subtilius punctulato; oculis quam antennarum articuli basalis longitudine vix minus inter se remotis; sulcis ocularibus profundis sat elongatis; antennis quam corporis dimidium parum brevioribus, apicem versus vix incrassatis, articulo 3^o quam 1^{us} 2^{us}que conjuncti sat longiori quam 3^{us} 4^{us}que conjuncti parum breviori, articulis 8-10 quam præcedentes haud brevioribus; prothorace quam longiori (et postice quam antice) fere tribus partibus latiori, crebre leviter minus subtiliter punctulato, antice bisinuato, a basi antrorsum arcuatim angustato, basi trisinuata, angulis anticis sat obtusis posticis (superne visis) subacutis; elytris sat grosse seriatim punctulatis, plus minusve substriatis,

interstitiis subtiliter minus crebre punctulatis; prosterno medio antice carinato; metasterno fere impunctato; abdomine sparsim subtilissime punctulato et sparsim subtiliter rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus nigro-piceo-setosis, posticorum articulo basali ceteris conjunctis longitudine æquali.

[Long. $5\frac{1}{2}$ - $6\frac{1}{2}$, lat. 3 - $3\frac{1}{2}$ lines.

A general resemblance in colour, size, and elytral striation seems to associate this species superficially with *C. mercurius*, with which it might be supposed identical until carefully examined; it is, however, very widely different from it in reality, being distinguished by the puncturation of its head, the presence of ocular sulci, the much less convexity and much stronger puncturation of its prothorax, the puncturation of its elytral interstices, the obscure vestiture of its tarsi, the much longer basal joint of its hind tarsi, &c., &c. The typical example has the elytra very decidedly striate, with the interstices rather strongly convex; I refer to the same species another example of the habitat of which I am uncertain, which seems to differ from the type only by the less marked striation and less convex interstices of its elytra.

Queensland.

C. MURRAYENSIS, sp. nov.

Elongato-ovalis; sat nitidus; niger, prothorace viridi (cupreo-micanti), elytris versicoloribus viridi-aureo-purpureo- et cyaneo-micantibus; capite sat crebre (inter oculos magis sparsim) distincte punctulato; oculis quam antennarum articuli basalis longitudine vix magis inter se remotis; sulcis ocularibus profundis subfoveiformibus; antennis apicem versus leviter incrassatis, quam corporis dimidium multo brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti parum longiori quam 4^{us} 5^{us}que conjuncti manifeste breviori, articulis 8-10 quam præcedentes haud brevioribus; prothorace quam longiori (et postice quam antice) duplo latiori, sparsim sat subtiliter punctulato (exempli typici in medio anguste

lævi), antice modice sinuatim emarginato, a basi antrorsum arcuatim angustato, basi media sat late sublobata, angulis anticis obtusis posticis fere rectis; elytris sat subtiliter seriatim punctulatis, interstitiis subplanis (♀ ?) vel subconvexis (♂ ?) subtiliter sat crebre punctulatis; prosterno medio convexo; corpore subtus sparsissime subtilissime punctulato, abdomine sat crebre minus subtiliter rugato; femoribus anticis antice sparsim sat subtiliter punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali quam ceteri conjuncti paullo breviori. [Long. $7\frac{1}{2}$, lat. $3\frac{2}{5}$ lines.

Much like *C. longipennis*, Hope, in general appearance, but differs from it by its eyes being less approximate and being bordered at their anterior corner with deep foveiform sulci, by the prothorax being much more transverse with its sides much more evenly converging from base to apex, by its elytral interstices evidently more strongly punctulate, its undersurface of a uniform shining black colour, &c., &c. Compared with *C. cupripennis*, the interval between the eyes is about a quarter narrower, the prothorax differs chiefly in the front angles being much more sharply defined, and the elytra are very similar, except in being more elongate and less convex, their outline curve viewed from the side being less strongly arched and reaching its summit at about the middle of its length. The whole insect has a much more elongate appearance than *cupripennis*.

S. Australia; Murray Bridge.

C. PUNCTULATUS, sp. nov.

Oblongo-ovalis; sat nitidus; niger, supra versicolor, elytris prothoraceque (hoc obscure) viridi-purpureo- et cyaneotinctis; *C. murrayensi* affinis; differt antennis apicem versus haud incrassatis, articulis 4° 5° que conjunctis quam 3^{us} vix longioribus; prothorace minus nitido, magis crebre (paullo acervatim) punctulato; elytrorum puncturis seriatim paullo majoribus in seriebus minus crebre dispositis, interstitiis nullo modo convexis multo magis fortiter punctulatis.

[Long. $7\frac{1}{2}$, lat. $3\frac{2}{5}$ lines.

This species is no doubt nearly allied to *C. murrayensis*; but, apart from other differences, is easily distinguishable from it by the quite different sculpture of the elytra.

N.S. Wales; taken near Wellington by Mr. Froggatt.

C. MACER, sp.nov.

C. murrayensi affinis; differt forma magis elongata magis parallela; antennarum articulo 3^o quam 4^{us} 5^{us}que conjuncti vix breviori; prothorace magis æqualiter punctulato (exempli typici ante scutellum distincte biimpresso), elytrorum interstitiis subtilissime sparsim punctulatis.

[Long. $7\frac{3}{4}$, lat. $3\frac{1}{4}$ lines.

Though very close to *C. murrayensis*, I feel no doubt this insect is a good species, its much more elongate form and the extremely minute puncturation of its elytral interstices being characters that certainly seem to indicate more than a mere variety. In the typical example the interstices of the elytra are absolutely flat, and the colour is considerably different from that of the type of *murrayensis*, the whole upper surface being of a pure bright green tone, and requiring to be looked at from a particular (oblique) point of view to bring out any purplish and golden tints.

S.A.; Basin of Lake Eyre.

C. OBLONGUS, sp.nov.

Oblongus; sat parallelus; sat nitidus; niger, supra versicolor, prothorace cyaneo-purpureoque tincto, elytris coloribus lætis (sc. viridi, aureo, purpureoque) vittatim ornatis; *C. murrayensi* affinis; differt prothorace minus transverso, magis fortiter et multo magis crebre punctulato, basi haud distincte lobata, angulis posticis (superne visis) subacutis; elytrorum puncturis seriatis minoribus interstitialibus multo majoribus (his cum illis subconfusis), interstitiis nullo modo convexis; corpore subtus magis distincte punctulato.

[Long. $6\frac{1}{2}$, lat. $3\frac{1}{4}$ lines.

This species is rather closely allied to *C. murrayensis*, *macer*, and *punctulatus*, but is smaller and narrower than any of them and differs from them all in the elytral punctures of the series and of the interstices being sufficiently nearly equal in size for them to appear confused together (almost as in *C. fastuosus*, Germ.). This latter character is extremely unusual in the genus. The clearly defined vittæ (running the whole length of the elytra) in which the different colours are arranged, is probably also a more or less constant and fairly reliable character. This is one of the most beautiful species of the genus.

W. Australia; Gnarlbine; sent by Mr. French. There is an example apparently identical in the S. Australian Museum from Innaminka, in the far north of S.A.

C. LEPIDUS, sp.nov.

Elongatus; subcylindricus; sat nitidus; niger, supra versicolor purpureo-viridi-cyaneo-et aureo-micans; capite sat crebre sat fortiter punctulato; oculis quam antennarum articuli basalis longitudine multo magis inter se remotis; sulcis ocularibus sat profundis minus latis sat elongatis; antennis apicem versus parum incrassatis, quam corporis dimidium multo brevioribus; articulo 3^o quam 1^{us} 2^{us}que conjuncti vix longiori quam 4^{us} 5^{us}que conjuncti vix breviori, articulis 8-10 quam præcedentes vix brevioribus; prothorace quam longiori (et postice quam antice) fere tribus partibus latiori, subfortiter minus æqualiter punctulato, antice sinuatim subtruncato, a basi antrorsum arcuatim angustato, basi media sat late sublobata, angulis anticis subacutis posticis fere rectis; elytris subtiliter seriatim punctulatis, interstitiis planis distincte sat crebre punctulatis; prosterno medio planato; metasterno puncturis setiferis sparsis instructo, episternis magis crebre punctulatis; abdomine sparsim punctulato et sat crebre rugato; femoribus anticis antice fere lævibus; tarsis subtus nigro-setosis, posticorum articulo basali ceteris conjunctis longitudine æquali.

[Long. $7\frac{1}{2}$, lat. $3\frac{3}{5}$ lines.

An extremely elongate species somewhat resembling *C. perlongus* and *cylindricus*, but differing from both *inter alia* by the presence of distinct ocular sulci and the greater width of the interval between the eyes. Compared with *C. cupripennis* this species (apart from its entirely different shape) has eyes about the same distance apart, prothorax somewhat less transverse and with front angles evidently more pointed, sculpture of elytra not much different, &c., &c. The outline curve of the elytra (viewed from the side) is not strong and its summit is at, or even a little *behind*, the middle of its length. The arrangement of colours on the elytra of the typical specimen is peculiar, the suture being widely purple except near the base and apex; the elongate spot thus formed is surrounded on all sides by a green ring; the lateral margins are widely green and the rest of the surface is dull greenish-æneous, changing in certain lights to coppery.

Victoria; sent by C. French, Esq.

C. INCONSPICUUS, sp. nov.

Elongato-subovatus; sat nitidus; niger, elytris minus læte versicoloribus (sc. obscure viridibus suturam versus aureo-purpureoque micantibus); capite crebre subfortiter sat æqualiter punctulato; oculis quam antennarum articuli basalis longitudine magis remotis; sulcis ocularibus nullis; antennis corporis dimidio sat brevioribus, modice robustis, articulo 3° quam 1^{us} 2^{us}que conjuncti parum longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes (3° excepto) vix brevioribus; prothorace quam longiori (et postice quam antice) tribus partibus latiori, sat crebre sat profunde (nihilominus sat subtiliter) punctulato, antice sat fortiter bisinuato, cetera ut *C. clypealis*; elytris subtiliter æqualiter seriatim punctulatis, interstitiis planis crebre distincte punctulatis; prosterno simplici (sc. nec carinato nec distincte sulcato); metasterno sparsim, episternis (his subnitidis) sat crebre, distincte punctulatis; abdomine sparsim punctulato minus perspicue longitudinaliter

rugato; femoribus anticis antice sparsim subtiliter punctulatis; tarsis subtus nigro-setosis.

[Long. $6\frac{1}{3}$ - $7\frac{1}{3}$, lat. $3\frac{3}{5}$ - $3\frac{4}{5}$ lines.

The form is a little ovate, being slightly at the widest behind the middle of the elytra. Viewed from the side the upper outline of the elytra is a feeble curve, the summit of which is at—or almost behind—the middle. The sculpture of the elytra is almost as in *C. cupripennis*, the puncturation of the prothorax being closer and stronger (*i.e.*, deeper and more conspicuous, but scarcely less fine) than in that species. The distance between the eyes is scarcely less than in *C. cupripennis*. Compared with *C. cupripennis* the head in this insect is much more closely and evenly punctulate, the antennal joints quite differently proportioned *inter se*, the prothorax less transverse, the metasternal episterna much more punctulate, &c. The general form is much more elongate and parallel with the outline curve of the elytra (viewed from the side) much feebler, with its summit much further from the base. The interstices of the elytra are absolutely flat.

W. Australia; sent by C. French, Esq.; also by E. Meyrick, Esq.

C. YORKENSIS, sp.nov.

Elongato-ovalis; sat nitidus; supra versicolor, viridi-aureo-purpureo- et cyaneo-micans; capite sat crebre sat fortiter punctulato, in medio spatio parvo impunctulato instructo; oculis quam antennarum articuli basalis longitudine vix magis inter se remotis; sulcis ocularibus sat profundis minus latis sat elongatis; antennis apicem versus modice incrassatis, quam corporis dimidium multo brevioribus, articulo 3^o quam 1^{us} 2^{us}que conjuncti parum longiori quam 4^{us} 5^{us}que conjuncti paullo breviori, articulis 8-10 quam præcedentes parum brevioribus; prothorace quam longiori tribus partibus (postice quam antice dimidio) latiori, distincte sat crebre punctulato, antice sinuatim truncato, a basi antrorsum (leviter arcuatim) angustato, basi media sat late vix lobata,

angulis anticis distinctis sat obtusis posticis (superne visis) fere subacutis; elytris sat subtilius seriatim punctulatis, interstitiis planis distincte sat crebre punctulatis; prosterno medio carinato; metasterno ad latera episternis abdomineque sparsim subtilissime punctulatis, hoc vix perspicue rugato; femoribus anticis antice sparsim subtilissime punctulatis; tarsis subtus nigro-setosis, posticorum articulo basali ceteris conjunctis longitudine æquali. [Long. $5\frac{1}{2}$, lat. $2\frac{1}{5}$ lines.

An ordinary looking species of rather dull aspect, but readily distinguishable from nearly all its congeners by the presence of well-defined ocular sulci in combination with a wide interval between the eyes. Placed beside *C. cupripennis*, Hope, the present insect is seen to be of much narrower and less robust form, with the interval between the eyes scarcely narrower, the prothorax much less transverse, and the seriate punctures of the elytra scarcely different, while the punctures of the interstices are evidently stronger. The outline curve of the elytra, viewed from the side, is moderately strong, and at its summit slightly behind the middle.

W. Australia; York.

C. CARINATICEPS, sp. nov.

♀ (?). Elongatus; subparallelus; sat nitidus; niger, elytris versicoloribus viridi- et purpureo-micantibus; capite prothoraceque subopacis; illo sat crebre subfortiter punctulato; oculis quam antennarum articuli basalis longitudine paullo magis inter se remotis; spatio interoculari utrinque carina brevi instructo; sulcis ocularibus ut *C. yorkensis*; antennis quam corporis pars tertia haud longioribus apicem versus haud incrassatis, articulo 3° quam 1^{us} 2^{us}que conjuncti parum longiori quam 4^{us} 5^{us}que conjuncti manifeste breviori, articulis 8-11 quam præcedentes sat brevioribus; prothorace quam longiori vix duabus partibus (postice quam antice tribus partibus) latiori, distincte sat crebre punctulato, antice leviter emargiuato, a basi antrorsum (præsertim ante

medium) arcuatim angustato, basi media sat anguste sublobata, angulis anticis obtusis posticis (superne visis) subacutis; elytris sat fortiter (latera versus magis fortiter) seriatim punctulatis, interstitiis planis subtiliter minus crebre punctulatis; prosterno medio antice carinato; metasterno sparsim perspicue punctulato et (episternis exceptis) rugato; abdomine minus sparsim punctulato et crebre rugato; femoribus anticis antice sat crebre minus subtiliter punctulatis; tarsis subtus fulvo-setosis, posticorum articulo basali quam apicales 2 vix longiori. [Long. 8, lat. $4\frac{1}{5}$ lines.

A fine large species, bearing considerable resemblance to *C. longipennis*, Hope, but at once distinguishable by the presence of distinct ocular sulci and of a carina on either side close to the eye, the opaque prothorax, the stronger seriate puncturation of the elytra, the absence of iridescent colouring on the underside, fulvous tarsal vestiture, &c., &c. Placed beside *C. cupripennis* this species is seen to be much larger, with the eyes evidently less (though not *much* less) remote, the seriate punctures of the elytra considerably larger and less closely placed (in most parts three—but here and there only two—punctures on a length equal to the width of an interstice), &c., &c. The eyes are remarkable for having their antero-internal angles completely rounded off. The outline curve of the elytra, viewed from the side, is feeble, with its summit about at the middle of its length.

N. Queensland; sent by C. French, Esq.

C. CATENULATUS, sp. nov.

C. carinaticipiti valde affinis sed capite prothoraceque versicoloribus, elytrorum coloribus viridi et purpureo alternatim vittatim positus, prothorace antice paullo minus angustato; elytris grosse seriatim foveolatis; cetera ut *C. carinaticipitis*.

[Long. 9, lat. $4\frac{1}{2}$ lines.

Notwithstanding the close resemblance of this insect to *C. carinaticeps* in nearly all its structural characters (I can find no difference in them except in the less anterior narrowing of the

prothorax) it seems impossible to regard it otherwise than as a good species, owing to the entirely different sculpture of the elytra, the seriate punctures of which are large foveæ (larger than in any other *Chalcopterus* that I have seen). The intervals between the series are scarcely wider—and in places even narrower—than the diameter of individual foveæ in the series. I have seen several examples all quite alike.

N. Queensland.